

LIBRARY RESOURCES AND TECHNICAL SERVICES

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A Brief History of the Technical Services in Libraries*

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THE HISTORY OF LIBRARIES, like that of most social institutions, is fragmentary, and for the beginnings we have knowledge only of what has come to us through the sieve of time. Of the history of the technical services in libraries we know even less, and some of our knowledge is tantalizingly incomplete. We may never know—and will never be satisfied that we know—when and where the first library was established, by whom, how long it endured, and when it perished. Similarly, it is fruitless to speculate on the first catalog or the first true classification system.

For one thing, we should find ourselves engaged in a series of semantic disputes on what each of us means by library, cataloging, and so forth. For example, soon after the program for this meeting was established, the program chairman got at least two inquiries as to what we were to consider "the technical services in libraries." His reply was that, for this program, we should include "acquisition, serials, cataloging, and that portion of photoduplication that applies to the internal operations of the library." At the 1940 Library Institute of the University of Chicago the chairman and editor of the papers had, I gather, the same difficulty. He suggested that the technical services included some aspects of selection, acquisition, processing, and preservation.¹ Maurice F. Tauber, in his excellent book, *The Technical Services in Libraries*,² includes acquisition, cataloging, classification, binding, photographic reproduction, and circulation. As you know, the Resources and Technical Services Division of the ALA embraces acquisition, cataloging and classification, serials, copying methods, and a Committee on Resources which may be considered one aspect of acquisition although its scope is broader than I seem to imply.

Obviously we have not reached a consensus on what the technical services really are. Randall felt that there were two factors which had introduced this grouping of operations: First, that they are "continuous processes which are apparently concerned only with materials;" and,

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second, that they "have been developed by a specific personnel working in a continuous tradition."³ Swank in 1948 added two additional criteria, one of which was implicit in Randall's first criterion. These departments do not meet the public to any extent, and there are similarities in the kind of work done. Their operations "are more formal, detailed, and susceptible to codification than those of the service departments . . . a larger amount of subprofessional or mechanical processes is carried on."⁴ If, as Randall suggests, the technical services "have been developed by a specific personnel working in a continuous tradition," then it is indeed fitting that this program begin with a summary of the history of the technical services.

I have already indicated one major difficulty in dealing with the history of the technical services, namely, the poverty of our knowledge. A second difficulty is the conflicting interpretation writers have made of the available evidence, compounded by positive statements without citations to the evidence—a sin which I, too, shall undoubtedly commit. Still another difficulty is the limitation of time which requires the selection of some high points in this history.

We do have some evidence that libraries existed in the Babylonian era many years before the founding of the library at Nineveh about 700 B.C., and though we might find their clay tablets difficult to handle in our libraries, at least one writer asserts that cataloging practices were even then well established. Unfortunately, she does not tell us what these practices were. A library at Akkad established by Sargon I in the 17th century B.C. was, this same writer tells us, classified by subject.⁵ Under King Assurbanipal the library at Nineveh flowered, for on his orders clay tablets were sought out, copied, and added to the library. (Perhaps we have here the antecedents of our Copying Methods Section?) For this library there was a catalog whose entries included the title of the work, the number of lines, the contents, the opening words, and the principal parts. The library was arranged, but according to what system we do not know.⁶

Little is known of the libraries of Greece, but we do know something of the Hellenistic libraries of Alexandria and Pergamum. The most famous library of the ancient world was founded at Alexandria by Ptolemy Soter about 300 B.C. and is said to have contained over half a million rolls.⁷ The librarian Callimachus listed the works in the Alexandrine Library in his *Pinakes*; some of the listings were roughly in subject arrangements. While there is some discussion among scholars as to whether the *Pinakes* represent a bibliography or a catalog, it seems to be agreed that the books listed were in the library at Alexandria.^{8, 9} In Asia Minor the library at Pergamum grew to some 200,000 rolls of papyrus and parchment which were cataloged—until Mark Anthony presented the entire library to Cleopatra as a small token of his esteem. Obviously, some acquisitions librarian had brought his art to a high state of development!

It is rather surprising that Rome, which left us so many legacies, transmitted so very little of its library practices. We know that there were

libraries in Rome and it is only logical to assume that some method of cataloging was practiced, but no fragment of a catalog has come to light to give us any sure knowledge on this point.

When we come to the medieval period we reach the era of the monastary libraries from which fragments of a great many catalogs have been preserved. Far too many, indeed, to discuss at length. The first catalogs we find date from the ninth century when libraries were quite small, and the catalogs rudimentary. Little improvement is found in the catalogs of the next few centuries, until in the late 13th century was begun an astonishing work: The *Registrum librorum Angliae*, the first known attempt at a union catalog—with the very sophisticated device of assigned numbers for each participating library.¹⁰ Time, as I have said, does not permit detailing the development of cataloging in this period. Let me refer those of you who are interested to Ruth French Strout's excellent and comprehensive article, "The Development of Cataloging and Cataloging Codes" in the October, 1956, issue of the *Library Quarterly*. I should, however, mention at least in passing in the 15th century Konrad Gesner's *Bibliotheca Universalis* which had a subject index of interest to the history of classification as well as cataloging, and Maunsell's *Catalogue of English Printed Books* which introduced the concept of entry under surname rather than under forename. In the 17th century Sir Thomas Bodley, the founder of the Bodleian Library at Oxford, set down rules for the building of a catalog. This was a classed catalog with an author index, a scheme which Gabriel Naude followed with his eleven classes and author index in his *Bibliothecae Cordesiana Catalogus*.

The French Revolution introduced the card catalog—not on clean 7.5 × 12 mm. cards, but on playing cards. The Constitutional Assembly through seizure found itself with a multitude of libraries. In 1790 it established rules for the care of books and in 1791 issued instructions for the cataloging of its libraries. These instructions probably are the first national cataloging code. The cards were to include the book number, the author's name, title, imprint, and size. Aces were to be reserved for books with long titles.¹¹ This was an eminently practical code and you recognize, of course, some of the elements which are still in use today.

An overly ambitious method of cataloging was adopted by the British Museum in 1825 and soon abandoned. In 1831 came Anthony Panizzi who developed his monumental 91 rules which were so revolutionary and controversial that they inspired the formation of a Crown Commission before which appeared many distinguished witnesses, some wise, some foolish. I think no other cataloging code has achieved the fame of Panizzi's rules; nor, when they are considered in their proper historical perspective, is their fame undeserved.

In America libraries were cataloged long before the Revolution, and all librarians know that Jefferson had cataloged his library long before it was sold to establish the Library of Congress. But not until 1852 when Jewett published his Smithsonian Institution Code—based in good part on Panizzi's 91 rules—did American cataloging really come of age.¹² Then,

in 1876, the fertile brain of Charles Ami Cutter produced the *Rules for a Printed Dictionary Catalogue* which further developed the art of cataloging. In these rules Cutter declared that ". . . it must be remembered that the object is not merely to facilitate the finding of a given book by the author's name. . . . we have also . . . to provide for the finding of all the books of a given author—and this can most conveniently be done if they are all collected in one place."¹³ I seem to recall some recent disputations on this point.

The late 19th century was an era in which the great librarians of the time—their names are still well known in library circles—actively and knowingly discussed cataloging and its problems. Such men as Dewey, Cutter, Poole, Hanson, Lane, Martel, and Richardson thought and wrote of cataloging, and the *Proceedings* of the ALA frequently reported their spirited debates. Was this a "golden age?" In 1904 appeared the fourth edition of Cutter's code, then in 1908 were published both the *Prussian Instructions* and the *Anglo-American Code*, the first essay towards an international code, the international aspects of which were abandoned for a time with the publication of the 1949 *ALA Cataloging Rules for Author and Title Entries*. The ensuing discontent set the stage for the Lubetzky and Paris statements of principle which are leading us to a revision of our cataloging code.

It has been said that "This act of classification made the ape a man." The history of classification is as ancient as that of cataloging (but will not herein be so long). Aristotle divided knowledge, as did Pliny, Porphyry, Bede, Alcuin, Roger Bacon, Francis Bacon, Descartes, Coleridge, Hegel, Compté, Spencer, and many, many others. The clay tablets of Assurbanipal were divided under six headings,¹⁴ and libraries from then until now have been classified according to more or less sophisticated systems, Jevons' dictum that "The classification of books is a logical absurdity" notwithstanding.

Of the many systems used in our history I shall mention, briefly, only a few. Francis Bacon's "Chart of Learning," published in 1605 in his *Advancement of Learning* has been a major influence on library classification systems, particularly in America. Thomas Jefferson's library was classified, apparently around 1770, according to a scheme based on Bacon's divisions. Edward William Johnston devised several different classification schemes based on Bacon. The one he instituted at the St. Louis Mercantile Library in 1857 still influences us today, for its main classes were inverted by William Torrey Harris—and it was Harris' scheme from which Melvil Dewey drew in conceiving the Dewey Decimal Classification of 1876.¹⁵ In general, up to the time of Dewey, library classifications were shelf classifications, or arrangements for fixed locations, not relative classifications of the books themselves. In 1891 Charles Ami Cutter devised his Expansive Classification, based on a classification of knowledge that, he said, followed "the evolutionary idea throughout." It had wide currency for some years but now is used by but few libraries here and abroad. In 1900 James Christian Meinich Hanson and his chief assistant, Charles Martel, under-

took the development of a new classification that borrowed much from Cutter's scheme. The Dewey Decimal System, first issued in 1876 and frequently revised—and sometimes even improved!—and the Library of Congress system are the two classification schemes which have almost a monopoly in our libraries today. There is some tendency for the larger research libraries to use the LC and for smaller and public libraries to use Dewey; but there are exceptions. Two other systems deserve at least notice: the very scholarly classification of Henry Evelyn Bliss which has gained more acceptance in Britain than in this country, and the most intriguing system of Ranganathan, this latter less well known and less understood than it deserves to be.

You will note that I have not tried to give even a summary of that part of the technical services which we call acquisition. I have found no sources from which such a summary could be drawn. Acquisition, or ordering, is a much neglected field in library literature. One can find a fair number of articles of the type that the late Ralph A. Beals called "glad tidings" and "testimony," in which the librarian of Upper Podunk extolls his discovery of the virtues of the multiple order form, while the next issue of the same journal will carry an article by the gloomy and reactionary librarian of Lower Podunk declaring that a precise cost study in his library showed that a list order form was far superior. Or, you will find articles on principles of selection, exchange programs pro and con, or how the wrong part of Hansard was ordered. But no history. Indeed, as I think the distinguished colleague who will follow me will tell you in some detail, there is not even a decent text in the field.

We tend to think of serials as a relatively recent development, but, in fact, there was an Egyptian newspaper about 1700 B.C. Osborn quotes lamentations from the 18th and 19th centuries on the multiplicity of serials.¹⁶ Today we are faced with an unprecedented increase in the number of serials appearing; they are increasing in a geometric progression, and it has been estimated that the number of scientific journals is increasing by between five and ten per cent each year.¹⁷ It is not the number of serials that distinguishes them from books, but rather their continuing nature, the frequency of their publication, the need for securing all of their parts, their multiple authorship and divergent subject matter, and other inherent characteristics. These make serials so different from other library materials that specialized personnel are needed to acquire them and to integrate them into our collections. Within this century serials departments or sections have emerged from acquisitions and cataloging departments.

Copying methods are new to this century; indeed, almost to the second quarter of this century. As we have seen, libraries were copying materials on clay tablets in 700 B.C., and we have the monks who labored over the tedious task of copying in the scriptoria of the medieval libraries to thank for the preservation of so much of ancient literature. But then there was a hiatus until in the 1930's microfilm entered the scene with such far-reaching effects. The actual impact of microfilm and other photocopying

methods on the internal work of the technical services themselves has not been fully measured. Indeed, they have yet to be exploited to the full. Various copiers, photographic and other, are in use in card reproduction, but the much-touted and greatly-desired "catalogers' camera" is still a wished-for tool. In this area I much prefer to look to the future, not the past.

I shall not speak this morning of the history of cooperative efforts in the technical services, for this deserves much greater attention than can be given it here. Suffice it to say that cooperation in acquisition and cataloging has been in the minds of American librarians for well over a century, that "cataloging in source" on an international scale was proposed in 1895, and that a method of card reproduction and distribution was suggested as early as 1851. The recent development of centralized processing centers is one of the more promising developments.

When did the concept of the technical services as a unit of library operation come into being? I have not been able to determine this with certainty, but there seems to have been one public library which had a technical services division in 1939, and by 1941 we know of three—two in public libraries and one in a university library. By 1948 forty-seven libraries were known to have had such divisions, and there are undoubtedly a good many more today.

Some of the reasons given for the establishment of technical service divisions were (1) to decrease the librarian's span of control; (2) to increase the flow of material; (3) to decrease processing costs; and (4) to promote cooperation between departments.¹⁸ These were not universally accepted, and there was at least one bitter denunciation of this organizational pattern by an eminent head cataloger.¹⁹ A few were doubtful that competent personnel could be found to head these divisions. Some thought that this pattern would work only in very large libraries; others thought that it was essential in smaller libraries where competent professionals would not be found to head the several departments. One or two wondered if there were not better and more logical administrative patterns to follow. Nonetheless, the technical services division is common today, even in smaller libraries.

The organization of the American Library Association took little cognizance of this evolution for some time, and then reluctantly. The Division of Cataloging and Classification achieved its status in 1940, having been before this date the Catalog Section, and earlier the Committee on Cataloging and Classification. The other technical services had much less: there was a Serials Round Table, active and effective, but hampered by the round table restrictions; there was a committee on acquisitions—sometimes—which met sporadically and was attended by those interested who were fortunate enough to hear of the meeting. It was not so effective as most acquisition librarians wished it to be. With the recent reorganization of the A.L.A. there was a period of uncertainty over the future: to continue the Division of Cataloging and Classification, or to organize a new more comprehensive Technical Services Division.

So many librarians indicated an interest in the broader division that a mail ballot was taken of members in the technical services, and the results brought the Resources and Technical Services Division into being. I can assure you that this took many to the wailing wall—some are still there. On the whole, though, it has been a successful enterprise and has accomplished much.

There is so much more of the history of the technical services that must be ignored today. I have not been able to bring out one feature which strikes anyone whose researches take him into our past—the cyclical recurrence of the same problem and an almost identical solution. “The truth is that the chief processes in library administration,” to quote a British library sage, “undergo periodical occultations. They emerge again the brighter for their eclipse, and shine upon us for a time, and fade again into obscurity. We lose ideas, regain them, fight against them, yield to them, and forget them once more.”²⁰ So many articles appear with fresh inspiration—but all too often this same fresh inspiration appeared in print in the late 19th century, again in the 1920's, and perhaps again in the 1940's. Plagiarism it is not, I think, but ignorance. A knowledge of what has gone before in librarianship seems to me the only reasonable base from which to probe the future of our several fields. Nor does it lack inspiration for those who will seek it.

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REPORTING OF SERIALS

The members of the Joint Committee on the Union List of Serials have made several important decisions concerning future reporting of serials acquisitions. In summary form, they are as follows:

1. Post-1949 titles and holdings should continue to be reported to *New Serial Titles*.
2. Previously unreported bibliographical changes in all serials, regardless of beginning date, should be reported to *New Serial Titles*.
3. New (in that they have not appeared in *ULS*) pre-1950 serial titles should be reported to the Union Catalog Division.
4. Holdings of pre-1950 serials appearing in the *Union List of Serials*, to the extent that they fall within the limitations set for the third edition, should be reported to the Union Catalog Division.

Contributing libraries should continue their present reporting of post-1949 titles and holdings to *New Serial Titles*. From now on, any previously unreported and unlisted bibliographical change in any serial, regardless of beginning date, should *also* be reported to *New Serial Titles*.

All reports of pre-1950 titles and holdings should be sent to the Union Catalog Division, Library of Congress, Washington 25, D. C. Reports of additional holdings of titles appearing in the *Union List of Serials* should be sent in only for titles that are not held by a large number of libraries (more than ten) or for titles for which the listed holdings do not show a desirable degree of geographical dispersion. In order to expedite the handling of these reports for serials, it is requested that they be separated from cards and slips for monographic works when they are sent to the Union Catalog Division and that they be marked "serials."

Once again the Joint Committee on the Union List of Serials and the Library of Congress join in expressing their appreciation of the support and co-operation of the libraries reporting to *New Serial Titles*.—*Mary Ellis Kahler, Chief, Serials Record Division, Library of Congress.*

The Present State and Future Development of Technical Services*

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The Present

TECHNICAL SERVICES, as we are using the term today, concerns the activities inherent in obtaining and organizing the library material for use. The major difficulty of technical services at the present time is that, for the first time in history, we are generating more knowledge than we can absorb.

It has been said that 90 per cent of all the scientists the world has ever known are living today. We know that the number of books published has doubled every forty-five years since Gutenberg. We are all familiar with the exponential growth of libraries, with academic collections having doubled every sixteen to twenty years since the eighteenth century, although this rate has decreased somewhat in recent years. Science abstracting services have experienced increases of over 100 per cent in one decade for the articles included in their indexes. The United Nations published as much in the first four or five years of its existence as the League of Nations published in twenty years. It would require 1,500 printed volumes to contain only the meteorological information recorded during the International Geophysical year. In the past decade as many research reports were written as were published in all the years before 1951. The Air Force has spent approximately \$1,000,000 gathering all available information about titanium.

This recitation, which dramatizes publishing as one of the most significant phenomena of the twentieth century, could be continued. We all recognize the staggering task faced by libraries in selecting the most useful items from this torrent of print, in obtaining it from the source of publication, and in bringing it into some kind of meaningful relationship with adequate guides to indicate what is in the library and where it might be located.

In an effort to cope with this problem, libraries have traditionally divided technical processing by function. Today most of us have an order department, a cataloging department, and, perhaps, a periodical or serial

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department. Some libraries place serials under the order function. Binding preparation seems to be at loose ends and may go to serials, cataloging, or circulation; however, I believe that in most instances binding is assigned to serials.

The development of academic libraries on the subject divisional principle has, in some instances, resulted in one or more of the technical service functions being directly assigned to the divisions. Some of the larger university libraries have departmental librarians come to the main library periodically to classify material for the department collection. The relationship between cataloging and reference work has led to the suggestion that these two functions be combined. This was done in at least one library I know of just after the turn of the century.

These divisions are not mentioned to tell you something you already know but, rather, to suggest that these customary divisions of work need constant analysis to determine if they are the best possible groupings of function in the technical services area. Too often we adhere to an organizational pattern simply because it has "always been done that way." Too infrequently do we really analyze whether a catalog department should be divided into broad subject groups, whether it should be divided according to classification, descriptive cataloging, and subject heading work; or whether serials cataloging would be done better under a serials department or in the catalog department.

I am convinced that there is no absolutely "right" way for technical services to be subdivided. In some instances you are forced to group activities according to the capabilities of staff and department heads; in others, the sheer inertia and expense of changing methods might preclude a desirable change.

However, it should be obvious that the organizational pattern should result from study and analysis of the future needs of the library rather than being based on immediate expediency each step of the way. We are all familiar with the controversies concerning the necessity or desirability for a formal accession record; a separate official catalog; a central serial record; a divided or classified catalog; placing lesser-used titles in storage where they are shelved by size; citing printed bibliographies as a substitute for analytic entries in the public catalog; shelving periodicals alphabetically by title rather than classifying them; classifying documents into the catalog rather than using the Superintendent of Documents and UN classifications; or placing standing orders for the titles issued by a given publisher.

Far too many decisions concerning these problems are made by intuitive and subjective judgment, or in response to traditional thinking on the part of the staff. In many instances this is all we can do, as no one has defined and studied these problems in an effort to obtain objective answers. Frequently some of these practices are so dependent on the human factor that it might be impossible to arrive at a conclusive solution.

There are, however, many substantive areas that should be subject to detailed and expert study. Examples of this type of investigation include

the present work being done on a revision of the catalog code rules. A start has been made on determining the effectiveness of subject cataloging. A long needed analysis of the bibliographic control of microforms has just been completed. Several libraries are taking a very close look at selective book retirement and the use of research library materials. There is a modest corpus of literature concerning the divided catalog, but too much of it is dependent on an unrepresentative sample of subjective opinion. What do we really know about the effectiveness of book classification so far as the user is concerned? The Library of Congress is now studying this facet of technical services which most of us have never questioned. Ralph Shaw, of the Rutgers University Graduate School of Library Service, has recently produced the American *Milkau* in a series called *The State of the Library Art*. I think it significant that the term "science" was not included in the title.

These types of study need to be extended—but, as soon as you have said this, you are immediately faced with the problem of who is going to do the study and who will pay for it. Too few libraries have sufficient staff to do more than simply keep ahead of the mail truck.

It is a generally-recognized fact that it is always "open season" on library schools; but it should be hoped that they will find it possible to take more initiative and provide the leadership for developmental studies in the future. The increasing number of doctoral programs in librarianship would seem to offer great promise in studying not just the immediate *ad hoc* problems, but investigating the broad principles and policies under which we operate. Too often our *modus operandi* is governed by a confederation of inbred tribal rites, and our energies are directed more at protecting past and present practice than in analyzing objectively and projecting for the future.

The reorganization of the structure of the American Library Association should make it possible for the divisions, sections, and committees concerned with technical services to do work in all areas with the effectiveness that has consistently resulted from the efforts of the Cataloging Section.

There are, perhaps, two principal approaches to the development of technical services. The first involves the cost and work-load problem. Small unit costs resulting from simplification can add up to substantial sums when multiplied by annual units of acquisitions or cataloging. The application of copying methods is an example. Too frequently we feel a sense of embarrassment about making such practices known. They are admittedly not worthy of a journal article; but some medium needs to be found for disseminating these ideas. The discussion groups founded several years ago, consisting of the heads of technical services for large and medium-sized research libraries, have produced excellent results. An example can be cited in the work-load studies that were done by Gerhard Naeseth at Wisconsin and Rolland Stevens at Ohio State.

Other than a constant examination of minute operating procedures, technical services need to be able to stand back and survey the philo-

sophical rationale of their functions and purposes. This aspect will be developed in the next part of this paper, which deals with the future development of technical services.

The Future

What can be said concerning the future prospects for technical services? In the field of public libraries, regional processing centers are already under development. It is, perhaps, safe to assume that this trend will continue and will spread to state junior college systems. There will be many irritations to be resolved in this transition but, with capable administration and a sufficient degree of communication and understanding, there should be no reason for regional processing not producing good results with lower costs and making a significant contribution toward solving the chronic staffing problem in acquisitions and cataloging. This will be true only when librarians realize that, by giving up a small amount of autonomy and individuality, they will make larger gains in efficiency of operation. One major difficulty to be overcome will be the involvement in red tape whenever the library is under the jurisdiction of state purchasing authorities.

It is to be hoped that libraries will continue the trend of job analysis in an effort to separate clerical work from the professional decision-making function among technical service staffs. The other side of the coin should also be recognized. This side is based on the assumption that, if professional work is divorced from routine, the technical services personnel might have a greater opportunity to do more analytical thinking and planning than has been done in the past. This factor is, perhaps, the most necessary for future development.

Librarianship has been more closely associated with the humanities than with other areas of knowledge. For this reason, many of us feel as though we were debasing the coin of the realm when mechanization and automation are considered. Many years ago Melvil Dewey, at one point of his career, advised a librarian that the typewriter was not a satisfactory substitute for a good library hand. Because of our inherent conservatism, few of us have ever taken the time or trouble to investigate or understand such principles as coordinate indexing, or the potential of electronic data processing for either acquisition work or bibliographic control.

Librarianship is based on bibliography, and bibliography is nothing more than information retrieval. Unfortunately, many of us stop our thinking with the codex book. The proliferation of publishing created a vacuum which the conventional approach to librarianship has failed to fill. As a result, a new type of librarian developed who is called a "documentalist" or an "information officer." These people are also involved in information retrieval, but they go beyond the printed bibliography and the card catalog. The documentalist is the first to acknowledge his relation to librarianship but, unfortunately, the librarian tends to regard the documentalist's activities with suspicion. A *sine qua non* for the future development of technical services lies in closing the gap between these

groups. The documentalists need our experience and we need theirs. We are all dealing with information retrieval.

Library training and philosophy is too often based on a trade-school approach of how to do a job within a preconceived frame of reference. Too little attention has been given to the basic philosophical concepts underlying the practice; too little attention is given to the historical development of the facets of librarianship or to alternate ways of doing a job. The future of technical services is dependent upon our ability to develop this type of vision.

CARDS FOR "THREE CENTURIES OF DRAMA"

The University of Missouri Library has cataloged the individual works included in the Readex microprint collection known as *Three Centuries of Drama*. Because of continued widespread interest they are offering to supply lithographed cards to subscribing libraries if there is enough demand.

It is proposed that libraries may subscribe for any number of cards for each title or by formula similar to that used by the Library of Congress. Overhead costs, such as preparation of lithographic plates, are to be included in the price of the first card, and additional cards will be sold at the cost of production only. Examples: If ten libraries subscribe for five cards each per title, the cost per title to each subscriber would be 25 cents; if twenty libraries subscribe to a total of fifty cards per title, the cost to the library ordering a single card for each title would be approximately 8 cents; to one ordering by LC formula 2sa (estimated at five cards per title) it would be 20 cents. As the number of subscribers increases, the cost to each will decline.

Orders will be accepted for the entire project only; cards will not be sold for individual titles. Payment may be made in either of two ways:

1. In advance. Payment will be based upon 5,000 titles; it is estimated that there are 5,600 titles in the set.
2. On receipt of each shipment. Delivery and payment can be scheduled to cover two fiscal years if requested.

Cards will be shipped in six groups to conform to the divisions in the publisher's check list:

American
English, 1512-1641
1642-1700
1701-1750
1751-1800

Larpernt Collection of Manuscripts, 1701-1750

It is planned that the first group would be completed within 90 days after initiation of the project, and that the final group would be completed by June 1963.

For further information or an order form write the University of Missouri Library, Columbia, Missouri.

The Book Catalog and the Scholar— A Reexamination of an Old Partnership*

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IF LIBRARIANS WERE TO SELECT a mentor from Classical mythology, he might well be *Janus bifrons* to remind them that in their professional philosophy, as well as in their book collections, the best of the past is brought together and preserved for the enrichment of the future. The revival of the library catalog in its earlier codex form gives reality to this symbolism, for the yellowed pages of the book catalog, honored by scholarly tradition, have been endowed with renewed usefulness through recent innovations in the technique of print.

Librarians were driven, according to Archibald MacLeish, to the card catalog "as a choice of evils;" a fortunate, though "logical result of the impossibility of unlimited use of paste and paper," in the assembly of scrap-book catalogs.¹ Thus he believed that necessity was the mother of "one of the great advances of American librarianship," a sentiment that reflects the conviction of most catalogers. MacLeish's emphasis upon the fortuitous is significant, for ever since that memorable Sunday morning in the Amherst College Chapel when the beauties of the decimal system and the vision of the new librarianship "flasht" upon the inward eye of Melvil Dewey, librarians have been guiding the destinies of their technical processes by Apocalyptic revelation.

The card catalog was not an American invention. Dorothy Norris has found reference to the species in the French Code of 1791,² so the American development may properly be regarded as a reinvention. But whatever its origins, the catalog has always been the librarian's defense against the scholar's contumely, and the 3 × 5 card the manna that has more than once nourished those children of Biblos when they wandered in the thorny academic wilderness. If MacLeish's reading of history is correct, certainly the card catalog stands as one of mankind's greatest monuments to a virtue that was born of necessity. Throughout the passing years it has come to symbolize at once the universal key with which one may unlock the totality of the library's intellectual store, and the scepter of dominion over the limitless boundaries of scholarship toward which

* This paper and the one following were presented at the ALA-RTSD/RSD Book Catalogs Interdivisional Committee Program Meeting, July 10, 1961, Cleveland. A third ("Book Catalogs: Prospects in the Decade Ahead," by David C. Weber) is appearing in *College & Research Libraries*.

its cards stretch out in neverending line like the progeny of Banquo. Here, indeed, was the perfect bibliographic tool before which all men could stand as equals.

The acceptance of the card catalog was not irrational, nor were its most ardent advocates necessarily blinded by logical inference. Its one and only virtue—currency, flexibility, responsiveness to change—seemed quite rationally to compensate for its immobility, complexity, destructibility, and steadily-rising costs of maintenance. That such a perfect thing could ever reach a point of diminishing returns, or carry within itself the seeds of its own destruction were quite effectively concealed by the simplicity of its early symmetry. A half century ago, who could have foreseen that an unprecedented growth in the bulk and complexity of recorded knowledge would place upon the card catalog an economic limit to its growth and befuddle its arrangement with abarrent forms of corporate entry or excessively elaborate subject analyses? On the contrary, in a day when the book catalog seemed permanently bound, the pun is not unintentional, by the rigidities of nineteenth century typographic composition, the card catalog did, indeed, seem to approach the ideal of the librarian's dream.

But for reasons which are largely psychological, the scholar has never been entirely happy with the card catalog, even though he has freely acknowledged its virtues. For centuries, the scholar and the codex have been constant companions, and they have formed a kind of silent partnership in the search for truth. The bibliography in book form was, therefore, a simple and logical extension of this union to which the efficiency of the card catalog seemed to do violence. Such great bibliographic monuments as the catalogs of the British Museum, the Bibliothèque Nationale, the Surgeon General's Library, the Astor Library and the *Gesamt Katalog*, to name but a few, commanded, and for that matter still command, a respect that one does not readily grant even to such a significant undertaking as the National Union Catalog at the Library of Congress.

There are probably a variety of reasons for this emotional reaction, certainly not the least of which is the identity that these catalogs have achieved through their association with their compilers. This is no mere catalog—who touches this touches a man. By contrast, a card catalog represents a continuing operation to which, through the years, many hands have contributed yet upon which no one has left the indelible mark of his own personality. Moreover, the card file has always been the symbol of impersonality, identified largely with personnel records of one kind or another, in which no one wants to be a mere cross-indexed annotation. That this is an irrational emotional reaction does not belie its potency. Perhaps it derives from the very virtue of the card catalog—its flexibility, and hence its impermanence. An entry in a book is there forever, but a card can be withdrawn from a catalog and departing leave behind it not even a foot-print on the sands of time.

Unfortunately, little is known about the ways in which the individual scholar accumulates his store of bibliographic information. But such

studies as have been made suggest that the role of the card catalog, especially as it relates to the subject analysis of recorded knowledge, is relatively minor as a bibliographic source for the mature scholar. Conversation with colleagues, foot-notes in professional writings, published bibliographies, indices, and abstracts supply the main avenues by way of which the scholar reaches his goal. There is good reason, then, why the research worker feels a sense of incompatibility with the card catalog for the bibliography in book form, whether it represent the contents of a specific library or the accumulated resources of the world of print, approximates the bibliographic form with which he is most intimately familiar and in the use of which he is most confidently secure. In short, a book catalog "looks good like a bibliography should." Whether in alphabetical or classified form, the book catalog spreads its contents before the user with a transparent and obvious efficiency that a tray of cards can never achieve. One cannot scan a bank of cards, in which each is given equal emphasis and none contributes to the differentiation between woods and trees.

Moreover, contrary to the opinions of those who have given us our professional cataloging rules, the scholar does not require, and can even be repelled by, an excess of bibliographic detail. The bibliographic citation with which he is most familiar is but the irreducible minimum, uncluttered by superfluities. The 3×5 card, however, provides ample space for such elaboration, and catalogers have not been slow to exploit it for their own esoteric ends. In the book catalog, however, a skillful use of typography, of indentation and subordination, and of lay-out can not only eliminate distracting detail, but also give dimension and reveal relationship.

At the Monticello conference of the Association of Research Libraries, William B. Hamilton, of Duke University, protested excessive attention to the refinements of classification. If it were eliminated, he argued, "we could put our thought and money, and the intelligence of our staffs, into more subject cataloging."³ But at the same meeting, Joseph S. Furton of Yale, maintained with equal vigor for the fundamental importance of organization, of classification, for "if we say that a library catalogue is a finding list, then it should follow that all listings in it are themselves findable . . ."⁴ The book catalog, by the effectiveness with which it displays its contents to the user would certainly seem to offer the greatest hope of reconciliation of these divergent points of view. Both men, it is to be noted, were impatient with an embarrassment of bibliographic detail, and both agreed that they would be quite content "with sufficient information to identify the item."⁵

The library catalog represents, so far as the present writer knows at least, the only major use of the card that presupposes permanence. In business, in industry, even in the world of scholarship, the card symbolizes that which is transitory, impermanent, subject to constant alteration and change. Until very recent years librarians themselves regarded the bound volumes of the accession record the most authoritative and nearly inde-

structable accounting of the library's holdings. Today, however, librarians have entrusted to one of the most impermanent of record forms their one and only inventory of the totality of their bibliographic store. Such a change may properly reflect a new concept of the library as a fluid, changing dynamic institution, and in many libraries, in public, college and particularly in special libraries, this point of view is entirely appropriate. But the world of scholarship is very heavily dependent upon the archival function of the library, and there would seem to be a certain inherent paradox in the ephemeral control of our intellectual heritage.

What then is the balance sheet of these two forms of the library inventory? To the credit of the card catalog are two impressive assets: complete flexibility and adaptability to centralization of cataloging procedures. Against these can be charged immobility, impermanence, high maintenance costs, and manipulative cumbersomeness. The book catalog, on the other hand, suffers from inflexibility and unresponsiveness to change: in short, extreme susceptibility to obsolescence. On the other hand, there may be credited to it, mobility, ease of duplication, low maintenance cost, discouragement of excessive bibliographic detail, and a format that facilitates use. With respect to costs of production, the situation is unclear regarding both instruments. No one has yet developed an economical method for the reproduction of cards in limited quantities, and as a result their costs have risen as labor costs have ascended. The spread of cooperative cataloging should, however, mitigate this to a substantial degree. The costs of producing a book catalog have always been regarded as high, though in terms of cost per unit entry such costs may have been exaggerated. E. J. Crane was wont to argue that *Chemical Abstracts* was relatively cheap because its cost per word, to the buyer, was lower than that for many popular novels. This savors somewhat of the Madison Avenue slogan that, "pound for pound, a Buick is cheaper than butter." But the fact remains that, when one considers the relatively low costs of reproduction in multiple copies, the costs of production of the book catalog have probably been somewhat exaggerated. Moreover, new techniques of photographic reproduction and mechanized composition, through the use of the punched-tape typewriter (Flexowriter), have substantially lowered the production costs of the book catalog, and the future benefits of continued improvement in the technology available to the compositor and printer can at present be but dimly foreseen.

Even this cursory examination of their respective balance-sheets reveals that neither bibliographic instrument enjoys a complete monopoly in assets and neither is bankrupt. Each is peculiarly adaptable to its own particular types of situation, and there is ample room for both in the world of scholarship. Only this is certain: that the book catalog is not an anachronism, a vestige of the library's paleolithic age. The bold step of the Library of Congress in returning to the book catalog, not only greatly extended access to its bibliographic treasures to many libraries that could never have undertaken the maintenance of a depository set of cards and hence greatly widened its services, but also it directed atten-

tion anew to the virtues of the book catalog as a bibliographic device. The decision to incorporate the unique items in the National Union Catalog was a second major step in reaffirming the utility of this traditional bibliographic tool. Here, indeed, as MacLeish said of the original edition, was the beginning of a new chapter in American librarianship. *New Serial Titles*, begun in 1951 and expanded in coverage in 1953, pioneered in the use of tabulating card technique for the production of a major book catalog undertaking. At about this same time the public library at King County, Washington, and the New York State Library at Albany began to experiment with the same technique for the dissemination of the listings of their resources. The latter has issued listings in the social sciences, and a complete catalog is in preparation. The catalog of the Lamont Library at Harvard is a true reversion to the printed college library catalogs of the nineteenth century, and in it the entries are arranged by subject and identified by a minimum of bibliographic detail. That the procedure was sound is evident from the popularity of the volume.

The King County Library of Seattle, Washington, which has been credited with the initiation of the IBM techniques for the production of a book catalog, produces unbound and ephemeral compilations. The Los Angeles County Library also employs IBM equipment, but for an elaborate listing of both juvenile and adult materials, by subject, by author, and even by foreign language and literary form. Monthly supplements and annual cumulations keep the listings of adult materials up-to-date. Techniques similar to those employed in Los Angeles were adopted at the Columbia River Regional Library. *The National Library of Medicine Catalog*, which like *New Serial Titles*, may be regarded as a supplement to the *National Union Catalog*, has been reproduced from proportional-spaced typewritten copy. It not only provides complete bibliographic detail, but includes lengthy notes whenever they seem to be appropriate. Author and subject listings are maintained in separate alphabets. At the Long Island Lighting Co., of Hicksville, N. Y., punched card techniques are employed to produce a printed book catalog that is distributed to more than one hundred areas. The major portion of the book is used for three main indexes: title, subject, and author in that order, but information is also included respecting periodicals and serials, newspapers, films and film strips, clipping file, and miscellaneous. Distribution of copies has greatly facilitated inter-library cooperation, encouraged inter-library loans, and generally promoted use of the collection. The use of punched cards also makes possible the preparation of specialized bibliographies, and it is interesting to note that the book catalog has not replaced the card catalog. The two forms are regarded as supplementing each other, and the latter, i.e., the card catalog, is still used for the recording of substantial amounts of bibliographic detail which, for practical reasons, is omitted from the book form. A Kodak Listomatic Camera, used in conjunction with punched cards, is employed at the Cardiovascular Literature Project at the National Academy of Science. This is not, strictly speaking,

a library book catalog, but rather an indexing and abstracting service. It is included here, however, because it illustrates a technique of reproduction that might well be applied to the publication of book catalogs. The libraries of the Monsanto Chemical Co. used punched-card techniques to maintain a union catalog of their holdings indicating author, brief title data, and, of course, location. The Advanced Systems and Research Library maintained by International Business Machines Corporation at San Jose, California, maintains a comparable catalog showing the combined holdings of four autonomous company libraries on the plant site. In an article in the November, 1960, issue of *Special Libraries*, Marjorie Griffin of the IBM Corporation has indicated that the use of punched-cards for the production of printed book catalogs is either currently in progress or under investigation also at the Lake County Public Library of Munster, Indiana; the Massachusetts Institute of Technology Library; the New York Public Library; Southern Illinois University Library at Carbondale; Squibb Institute for Medical Research, New Brunswick, N. J.; and the University of Wisconsin Library School. However, since she interprets "book catalog" very broadly, to mean almost any current listing of titles, including even such services as the *ASTIA Technical Abstracts Bulletin*, and *Chemical Titles* of the Chemical Abstracts Service, her listing is to be viewed with some skepticism. Finally, one should mention the proposed subject and author catalog of National Reactor Testing Station of Phillips Petroleum, near Idaho Falls, Idaho. This catalog, which will have monthly cumulated supplements, will, according to present plans, be produced from Multilith mats imprinted by an IBM 704 tabulator.

Even this brief enumeration of activities indicates a substantial increase since 1950 in the prevalence of book catalogs and the new and constantly improving methods of reproduction suggest no diminution of this trend. At the present time, these new methods of reproduction can be identified as of three basic types: (1) reproduction of original text (typed or printed cards) by photo offset; (2) the use of punched card or tape equipment, of varying degrees of sophistication, to produce copy for Multilith, offset, sequential photography, or machine printing; and (3) the combining of microfilm with electrostatic printing. At the moment, the punched-tape typewriter, which has a print-out of 600 pages an hour would appear to be especially promising. With certain types of equipment, print-out rates run as high as 900 lines per minute. But, there is, of course, no reason for believing that these innovations exhaust future possibilities for technologic improvement. The printer's art is today experiencing changes of a magnitude that no one can now predict, and that these innovations will further encourage the production of book catalogs would seem to be a justifiable assumption.

This revival of interest in the book catalog does not imply disillusion with the card form. Rather, it signifies a reexamination of the total problem of bibliographic organization, and a recognition that there is no universal, no one best, instrument that will meet all the needs of the

scholar. At the same time that some librarians have been reconsidering the book catalog, others have been investigating a variety of mechanical and electronic devices for informational retrieval. Janus-like, the scholar is looking back to the past as well as forward to the future for more effective means for the organization of his materials. The book catalog, the card catalog, and the electronic mechanism—each has its own unique characteristics that endow it with its peculiar utility for certain types of library and research situations. This is in the best traditions of librarianship, a reaffirmation of the need for an unceasing search for improvement, whether that search leads to a reassessment of the past or to areas that are as yet unexplored .

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NATIONAL UNION CATALOG OF MANUSCRIPT COLLECTIONS

A contract to publish in book form the National Union Catalog of Manuscript Collections, 1959-61, has been awarded to J. W. Edwards Publishers, Inc., 2500 South State Street, Ann Arbor, Mich. The expected date of publication is August 1, 1962.

This first volume will contain about 7,300 collections arranged in the sequential order of the LC card numbers and will also contain three indexes: an extensive index of names, a topical index, and an index of repository holdings. The estimated number of pages is about 1,200.

Book Catalogs and Card Catalogs*

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THE YEAR IS 1961 and we are less than forty years away from the 21st century. We can expect that each succeeding year will bring increased awareness of the proximity of the new century and of the changes it will generate. Just as the 20th century has witnessed revolutionary changes not dreamed of in 1861, the 21st century can be expected to produce changes we can not now foresee.

What about libraries, and librarianship, in the 19th, 20th, and 21st centuries? We recall the revolutionary changes that came in the last quarter of the 19th century and the first quarter of the 20th century. They include a great expansion in the number and types of libraries, in the growth of library collections, in concepts of library services, in the development of library schools, and in the techniques of our profession. In the last category, four major developments come to mind: classification systems, cataloging rules, the dictionary card catalog, and printed catalog cards.

What changes have come during the second quarter of the 20th century and the first years of the third quarter? These years have witnessed tremendous growth in library collections and many refinements and modifications of library purposes, services, and techniques, but no real changes. Classification schemes have increased in number; cataloging rules have been revised; the number of printed catalog cards has increased year after year; and dictionary card catalogs have grown to elephantine size. We should modify this rather gloomy picture by citing the development of union catalogs, depository centers, and the Farmington Plan, as evidence of increased cooperation among librarians.

Looking back over the past 35 years it is difficult not to conclude that librarianship is a conservative profession. It is a good sign for the future that an increasing number of librarians are looking closely at the present situation and asserting that librarians must act on new ideas and new procedures or stand a chance of being lost in the rush toward the 21st century.

Following this broad introduction, I shall now direct my attention to one segment of the problems that face large libraries: the card catalog. The dictionary card catalog, developed on the philosophy of encompassing an entire library collection in a single index, has grown to monu-

* Paper presented at the ALA-RTSD/RSD Book Catalogs Interdivisional Committee Program Meeting, July 10, 1961, Cleveland. For a related paper see: MacDonald, M. Ruth. "Recataloging." *Bulletin of the Medical Library Association*. July, 1961.

mental size. As it has increased in bulk, it has lost its ability to serve specialized needs.

It is now evident that the complete coverage attempted by the dictionary catalog is impossible, and even undesirable, for the less-sophisticated reader. It is also evident that no one catalog can include enough information to satisfy all needs. It has taken us a long time to realize that the greater the number of elements we crowd into one catalog, the less we can do with those elements. The dictionary catalog, once our greatest hope, now threatens to destroy itself, and in so doing will wreak havoc on our library services.

We are faced with the realization that we must find and adopt different forms for the cataloging records if we are to curtail further losses in catalog efficiency. To foresee what is needed and then to remedy the situation will require careful observation, measurement, imagination, and probably a certain amount of trial and error. One thing is certain—the process of discovering a solution to our catalog problems must not be limited to a single pattern or method.

At this point I shall further limit my remarks to a discussion of one possible solution of the present dictionary catalog problem—a pattern of book catalogs which might be supplemented by one or more limited card catalogs.

Let me digress long enough to point out how pertinent this discussion is to the current revision of cataloging rules. The revisions propose some changes which will have far-reaching results. A large library considering the effects of the revised rules on its catalog if implemented according to usual recataloging patterns, might decide to limit its acceptance of the new rules. It might not adopt all of them and it might have to find short-cuts in implementing those it does adopt. Compromising the application of the new rules will not provide a satisfactory solution.

It seems to me that library and catalog needs of the future support the adoption of the revised rules and further, that these needs dictate a shift to new catalog patterns. In fact, the new rules offer us the opportunity for a much-needed fresh beginning.

I believe this fresh beginning will mean a new pattern of book-and-card-catalogs for large libraries with research collections. I believe this fresh beginning is inevitable, even without the stimulus of the revised cataloging rules, and that we must begin now to prepare ourselves and our libraries for it.

It is a bit difficult to say how we should ready ourselves for changes on which we are not yet agreed. Possibly the best first step would be to cease to be satisfied with what we now have, with the present purposes and patterns of our work, and with our individual knowledge. Instead of a personal and individual day-by-day approach to our work it would be desirable to develop a unified approach that considers and relates present operations to future needs. As individuals we would still get on with our immediate jobs, but with an awareness of the future not now common among librarians.

While there does not seem to be any one way to ready our libraries for the needed changes, a common-sense approach is available. We can start by admitting that good as our libraries may be, they can and must be made better if they are to measure up to their greatest potential.

I would suggest that the work the catalogers have done during the past several years in studying and revising cataloging rules is a step in the right direction. The step has been too limited, however, because librarians other than catalogers have not participated to any extent and because the work has been confined largely to one element of cataloging. Similar work is needed on subject headings, classification, on the form and content of library catalogs, and on many topics outside the area of the technical services.

Let us return to a consideration of "a pattern of book catalogs supplemented by one or more limited card catalogs"

My favorite approach to any catalog problem is an application of the "divide and conquer" technique. This is just another way of saying that a problem should be broken down into its component parts in order to identify where changes are needed and what changes should be made.

How might the "divide and conquer" procedure be applied in a practical way to the problems presented by a large dictionary catalog? I think the first and most important step would be to decide to close the present catalog and begin an entirely new one. The accumulations of the past would thus be separated from and sheared of their ability to influence the new catalog. The date selected for commencing the new catalog could be a publication date or a cataloging date. Whatever date is chosen should be set far enough in the future to allow ample time for planning, for preparing the staff, and for acquainting the public with the plans.

While the plans must include careful decisions on the form and arrangement of the new catalog, they do not need to include final decisions on the disposition of the old catalog. I have no doubt that the future will provide the technical know-how necessary to preserve in usable, space-saving form, the essential information presently contained in any large dictionary catalog.

Let us consider the case of a large university library with a correspondingly large dictionary catalog, a number of branch catalogs, a generous book fund, an active academic program, and a staff geared to current operations. Presumably its central catalog is a good one, although its size is an impediment of sorts, some of its subject headings and cross references are out of date, and some of its information duplicates information available elsewhere in the library.

This library makes full use of Library of Congress cataloging and participates in various cooperative cataloging efforts. It must, therefore, take into account what other large libraries are planning to do about implementing the revised cataloging rules before it decides on its own course of action. On the basis of its own future needs, and because of its cooperative interests and responsibilities, the library decides it will adopt

the new cataloging rules as of a predetermined date. It also decides it will begin a new card catalog.

The new card catalog, either divided or arranged in dictionary form, will provide for some of the changes needed. The changes permitted, however, will not be sufficient to solve the problems of the future. These problems relate to catalog size and age, compounded by technical knowledge, subject and language proficiency, duplicate effort, staff shortages, time, and money. While a new card catalog would help, at least for a time, it would not be a lasting solution.

A combination of book catalogs and card catalog supplements on more or less traditional patterns might provide some relief for the university library's catalog problems. But "some relief" is not a solution.

It seems to me that combinations of book catalogs and card catalogs in new patterns are needed and are bound to develop. Let me outline briefly one pattern from the great variety of patterns we must consider as we search for the best patterns for the near future and for the more distant future.

This plan presupposes the existence of a national central cataloging office, properly staffed and equipped to service its subscriber libraries. We have such a center now, in part, in the Library of Congress.

The central cataloging plan would require the cooperation of publishers (commercial, educational, institutional, governmental, etc.). It would concern titles in their pre-publication form as well as in their published form. While the plan thus bears some resemblance to the recent Cataloging-in-Source experiment, it would avoid some of its difficulties because galley proofs could serve the plan's pre-publication needs.

Each new publication would be given a unique identification number. The number would become an inseparable part of the publication, being printed on an inside page and stamped on its cover. The number would become the title's publication-stock-order number, its library shelving and circulation number, and its catalog card number, if any.

For a discussion on such numbering I refer you to "A Proposal for a National Code Number System for Current Publications," by G. A. Harrer and Alex Ladenson (*LRTS*, 6:4-12. Winter 1962).

On the basis of the galley proofs or the published titles supplied by publishers, brief or full cataloging records would be prepared. All name entries and their cross references would be properly established and subject headings would be regularly selected and assigned. The "briefness" in the description of titles cataloged from galley proof would relate to such details as collation (1 v. would be used instead of paging) and in the possible omission of bibliographic notes.

The resulting cataloging records would appear in a frequently issued and cumulated printed book catalog, issued in three or more sections. (For example, I suggest that three sections are essential: (1) author; (2) subject; (3) numerical. There might well be separate catalog series for different languages, for different types of publications, etc., etc.). All of the "brief" descriptions would be superseded by full descriptions after the

books are published. Only the full descriptions would be published in the larger cumulations of the printed catalog.

The required sections of the printed book catalog in sufficient copies would become the library's new catalog. There would be a supplementary numerical card catalog to supply information on local ownership and on special locations. Any such numerical card catalog would be a limited file because as each large cumulation of the printed catalog is received, its numerical sections could easily be marked. If desired, the numerical cards then withdrawn could be re-arranged and used as a basis for annotating the author section.

Cards for the numerical catalog and/or the shelflist could be prepared from printed preliminary or final cataloging information, because the essential data on identification number, names, and subject headings would be complete in both listings. If desired, the central cataloging service could supply printed cards for the usual records and for any special records, such as a catalog of local authors.

We must acknowledge that specialized local cataloging needs do exist. Because they are not all equally legitimate, each should be required to justify itself before it is permitted to interfere with any new plan for centralized cataloging. A centralized cataloging plan should provide enough advantages to outweigh the disadvantages that might result from the elimination of special local records designed to meet specialized local needs.

Titles published by the cooperating publishers after the plan becomes operable would be ordered by their identification numbers. Pre-order searching would be limited to a check of the publication identification number in the library's outstanding order file and in its ownership-location records.

Should the library subscribers prefer to continue for the present to use subject classification for all or a part of the new publications, this could be accomplished within the plan. The class number from an acceptable classification system could be printed as part of the identification number. The class number added above the identification number would turn the latter into the author and book number elements of today's call number. There could be no problems of duplicate call numbers. The card in the library's ownership-location records could still be arranged under the publication's identification number, and this number could still be used for order purposes.

Such a plan would bring large savings in personnel, time, money, and space requirements. It would curtail, and in some instances eliminate, present costs of subject classification, cataloging, call numbers, filing, catalog cabinets, and processing. Under such a plan there would be a greatly reduced need for librarian-catalogers, except in the central cataloging office. In the larger libraries a small staff would still be required to catalog books needed urgently, special collections, unique items, and old publications.

The convenience of multiple copies of the various sections of the

printed catalog, and the availability of additional personnel no longer required in the technical service areas, should counterbalance any preference the public service staff may have for the present card catalog's well-known physical and bibliographical form.

One advantage of using a library collection through printed subject catalogs is the variety of approaches they afford. This is especially advantageous where distinctions between specialties are not clear-cut, yet their terminology remains distinctive. Another advantage is that as a need arises for a new subject approach, it can be supplied while the former approaches are still maintained.

Such a centralized cataloging plan would result in a uniform product and uniform records in cooperating libraries. This uniformity would help both the libraries and the users of libraries. I have no doubt that under such a system a more generous supply of entries will be technically and economically feasible. Under a centralized system there could be fully qualified experts in three major areas: cataloging, subject analysis, and languages, as well as experts in the various forms of material: documents, music, maps, serials, etc.

Under the centralized system suggested, a library could still have a card catalog, because the necessary cards could be reproduced from the book catalog, or obtained from the central office or through the book publisher or dealer.

The printed book catalog will no doubt include more entries than are available in any one library. I do not believe this is necessarily bad, for it will build into the locally-used catalog some of the advantages of union catalogs and subject bibliographies.

In using a library, the identification number will be a convenient way to list the books wanted from the shelves, and the library page (human or machine) would search the ownership-location records. An added advantage would be the use of the same number for a title in all libraries under the plan.

In case anyone thinks this plan is too modest and too unsophisticated—let me say that I agree. It is offered merely as a basis for further discussion on the immediate future of "Book Catalogs and Card Catalogs."

The Draft Code and Problems of Corporate Authorship*

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THE PRINCIPLES UPON WHICH the rules of corporate entry are based in the current draft are briefly as follows:

1. A work produced by, or issued in the name of, a corporate body is entered under the name of that body.
2. A corporate author is normally represented in the catalog under the name and form of the name by which it is most commonly identified in its works; a change of name of a corporate body is to be treated as a change of identity.
3. A corporate name is entered directly in the form used.
4. The name of a corporate body is distinguished from similar names of other bodies by place of location, community represented or served, date of founding, or other appropriate qualification.

The principle of corporate authorship is well established in American cataloging practice, and a definite trend towards a wider acceptance of this principle has become evident in the post-war years. Since 1955, French policy has recommended rules of corporate entry very much like those in the Lubetzky draft, and catalogers in countries under the influence of the *Prussian Instructions* tend to approach the Anglo-American position. Finally, the Paris Conference (October 1961) adopted corporate entry.**

The present ALA rules place emphasis on corporate entry under the official or legal name. The draft rules, on the other hand, try to implement the principle that a corporate author is normally to be represented in the catalog under the form of the name by which it is most commonly identified in its works.

Although the response to the proposed rule, in general, has been favorable, strong misgivings have been expressed by some reference librarians and catalogers.

The former, particularly, have advocated use of the official or legal form of corporate names as, in the case of personal authors, they have urged the use of the full form of name followed by the dates of birth and

* Revision of a paper presented at the meeting of the ALA-RTSD Catalog and Classification Section in Cleveland, June 12, 1961.

** See I.F.L.A. International Conference on Cataloguing Principles, Paris, 9th—18th October, 1961. *Library Resources and Technical Services*, 6:161-171. Spring 1962.

death. That is to say, they take the position that the form of entry adopted must provide absolute *identification* of the author, personal or corporate, and that a rule which assures only that the entry will be adequately differentiated so as to make unlikely the inadvertent use in the catalog of two or more forms of entry for the same author, is not enough.

The hesitation shown by some catalogers appears to arise chiefly from the fear that establishing the entry under this rule will involve a more serious risk that a corporate author will be represented in the catalog under two or more forms of its name. The reasonableness of these misgivings will be acknowledged by all who have observed the inconsistencies in the names by which some corporate bodies identify themselves in their various publications or even in a single one. And yet it must be recognized that these variations in name constitute exceptions to the common practice.

Whether absolute identification of a corporate author in the catalog entry is a proper function of the catalog perhaps is debatable. Actually, forms of entry adequately differentiated when necessary, usually also result in effective identification. The use of the official or legal form of name may in fact prove more of a hindrance than a help. Hugh Chaplin at the Montreal Institute urged consideration of the users' approach in the matter of differentiation *vs.* identification of authors. It was his belief that the user of the catalog may have his approach to material made more difficult by over-differentiation and that the demand that an author should not be concealed in the catalog under the full legal form of name comes, in fact, from the user. But, he emphasized, to restrict the catalog entry to the name generally known to users, does not absolve the cataloger of his responsibility of identification. Even under the proposed rules, the cataloger must make reasonably sure that he does not establish two or more different forms of entry for the same author.

Only catalogers have any real notion of the large share of cataloging time that must be devoted under the present rules to searching for authoritative information to determine the official form of name of a corporate body. Under the proposed rule, however, the cataloger usually will need only to adopt the form given on the title page after verifying whether or not this form has already been established in the catalog. The rules in the present draft provide guidance in cases of variant names—though the final draft may need to do still more along this line. My personal experience leads me to the conclusion that the proposed rules will promote more efficient cataloging, and that they will also prove more satisfactory to the library user.

Some criticism has been directed at the rule which directs that, "if the name of a corporate body has changed, its several names are successively used and linked by appropriate references." The dissenters take the position that the second objective—to display together in one place all the works of an author—should hold equally for corporate and personal authors. The proposed rule would result in dividing the works of a corporate author between two or more places in the alphabetical scheme of the catalog. As a consequence, they point out, there would be not only

much unnecessary duplication of catalog entries for these publications, but also unwarranted and needless inconvenience to the user if he is interested in discovering all of the works of the corporate author held by the library.

These critics reject as a form of rationalization the proposition that no matter what names a person may use in the course of his life, he remains the same individual, whereas a corporate body is subject to various functional and organizational changes which often result in a change of name and, in effect, a change in identity. To them, the changes in name of the institution established as the Farmer's High School and called successively Agricultural College of Pennsylvania, Pennsylvania State College, and Pennsylvania State University, represent not changes in the identity of that institution but only changes in its function and scope. But at the Montreal Institute the discussion on this question made it evident that the practical advantages of entry under successive names, rather than the attempt at a theoretical justification, had greater influence. I am convinced that Sumner Spalding voiced a majority opinion when he stated that, despite the weakness of any theoretical basis to support it, the proposed rule was nevertheless one of the most practical, sensible, and useful changes to be found in the draft code and that, therefore, he endorsed it heartily.

The present ALA rule requires that all publications of a corporate body be entered under the latest form of its name. This demands wholesale recataloging of all works already represented in the catalog under an earlier form of name. Proof that libraries have found the burden imposed by the present rule heavier than could be borne is found in the fact that many catalog departments have abandoned it or at least modified it. Some of the larger libraries were following the policy of entry under successive names even before the present code revision got under way. In this connection, it is interesting to note that the publications of the Pennsylvania State University and its antecedents are cataloged in its own library under the four names by which that institution has been designated since its establishment in 1855. In reporting this fact, Evelyn Hensel indicated that, even though application of the proposed rule results in a larger number of catalog entries, she nevertheless favored entry under successive names. Other libraries, the University of Illinois Library for instance, years ago adopted the practice of leaving under the earlier form of name all monographs which were issued and serial titles which had ceased publication prior to the change in name. Not only do these departures from the old rule further the cause of cataloging economy; they also avoid the bibliographic absurdity of showing the works of a subordinate unit which ceased to exist prior to a change in name of the parent body, under an entry made up of the parent body's latest name and a subdivision representing the defunct subordinate unit.

But, logic and economy in cataloging are not always in themselves sufficient justification for urging a change from past practice. Certainly users of the catalog should also benefit by the proposed change or, at

least, they should not find the new entries less useful than the old. With respect to entry under successive names, opponents maintain that, by failing to display together in one place in the catalog all the works published by a corporate body under a succession of names, it would handicap those readers who may be interested in discovering all such publications in the library.

But is this the usual approach to an author entry? Proponents of the change are convinced that the reader with far greater frequency wants only to find a particular work and that his search for that work is facilitated by entry under the name of the corporate author when the work was published—generally, the name as it appears on the title page—and by which it is commonly cited in references, trade catalogs, and published bibliographies. The new rule would thus be a major step in drawing together bibliographical, booktrade, and cataloging practice.

The most important effect of the principle which declares that “a corporate name is entered directly in the form used” is that it does away with the difference in the treatment of societies and institutions (or establishments). Not counting rules of entry for government bodies, the 1949 ALA code came up with some forty rules for societies and institutions and an additional nineteen rules for “miscellaneous bodies not included in the specifications for societies and institutions.” The present draft code avoided this trap. The immediate reaction to this radical proposal on the part of many was one of enthusiastic approval, but others, though accepting the idea in principle, urged strongly that the rule should not be applied across the board—that exceptions needed to be made for institutions with certain kinds of names.

David Watkins, among others, suggested that it would be unwise to enter directly under their names institutions whose names begin with common generic terms or phrases, such as *university* or *public library*, because this would create excessively long files under these terms. But is this a reason which would justify a deviation from the general principle? After all, this is a problem which, as in many other extensive files, can be remedied through the appropriate use of guide cards.

Moreover, this suggested disadvantage is largely offset by the resulting reduction and simplification of files under geographic names, of which *New York* and *Washington* are prime examples. This point is underscored by Laura Colvin in the working paper she presented at the Stanford Institute. When applying the proposed draft rule to a sampling of institutions entered according to present ALA rules under place, namely, New York (40), London (35), Boston (25), Washington, D. C. (25), Brussels (13), and Paris (10), she found that the number of entries under place was reduced to six or less in every case.

The position of those who favor entering “local” or “civic” institutions under place instead of directly under name, is well stated by Susan Haskins in the summer, 1961, issue of *Library Resources & Technical Services*:

“From the standpoint of use of the catalog the most direct approach would appear to be by the place where [the institutions] are located.

Also, there would seem to be a real advantage in bringing together the schools, hospitals, churches, museums, etc., that generally may be of slight interest individually, but which play such a large part in the life of a city. If an institution bears a name that has little significance without the place where it is located, whether it be the Free Public Library, the First Church, Unitarian, Saint Paul's Church, or Saint Luke's Hospital, is it not logical to record it under the name of the place?"

But, it may be asked, if this is logical and if these assumptions are well founded, shouldn't all institutions affecting the economic, social, and cultural life of the local community be entered under the place, something which even our present rules are not designed to do? And, why not make the same provision for local societies, clubs, business firms, etc.? Where, then, should the rule draw the line? The primary purposes of this proposed exception to the rule for direct entry are (1) to facilitate a subject approach to the locality, and (2) to provide a convenient collocating device for so-called local institutions, purposes which can be accomplished satisfactorily by the use of secondary entries and suitable references.

Even experienced catalogers still find it necessary to check which particular ALA rule of entry applies to a specific institution. How, then, can it be expected that the ordinary reader, except he be possessed of some intuitive insight, will normally be led straight to the entry actually used in the catalog, be it under place, jurisdiction, directly under name, or in still some other way?

Critics of the proposal to enter institutions directly under name have at various times and places suggested that the reader's approach often is not that which the draft code provides. But, so far as these opinions have any validity, they are based on observations of readers who have become conditioned to catalogs constructed upon the present ALA rules. Surely, a reader not so conditioned would in all probability look for an institution under the name by which he knows it or as he finds it cited in bibliographical references, that is to say, the form by which it is most commonly identified in its works.

Having examined these problems of corporate authorship and weighed the possible alternative solutions, I conclude with this plea. Let us support rules of entry governing the publications of corporate bodies along the lines developed in the draft code. By doing so, we shall be able to avoid many of the traditional technicalities of cataloging and we shall be able to walk out of the labyrinth created by our present rules for the entry of societies and institutions.

Reflections on Catalog Code Revision

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FOR SEVERAL YEARS NOW catalogers have been waiting for the green light while traffic engineers argue whether the light should be emerald green, hunter green or nile green, whether it should be round or square, whether it should be above or below the red light, whether it should in fact be green, and whether there should be any traffic lights at all. Why do they not change the light to green, even if it is a green we do not all like, and let us proceed on our journey?

No cataloging code can be perfect. Every code must be a compromise, and to have to wait while the experts quibble about the exact nature of the compromise is frustrating and unhelpful for any cataloger or cataloging department that has a constructive, forward-looking policy. As a head cataloger who is anxious to have a constructive policy for the catalog, I would rather the discussers came to some agreement on a code and gave us a chance to put it into operation.

There are several basic facts that the compilers of a cataloging code need to bear in mind:

1. The aim of any cataloging code is to make library materials available to users of the catalog at any point where they might reasonably be expected to look for it. The catalog users are moderately intelligent human beings, but we cannot expect them to master a complex set of rules in order to find their way round the catalog. It is enough that they should know the alphabet. Are we expecting too much of them even in imposing on them our rigid categories of author, title and subject entry?
2. The cataloging rules are manipulated by catalogers who are at least as intelligent as the library users, who are trained in the principles of cataloging, and who presumably have some rudimentary feeling for order, accuracy and consistency (If they have not, they have no business being librarians, let alone catalogers) If any effort is to be made, it should be made by the compilers of the catalog and not the users. Catalogers can be trained to use a fairly complex set of rules and to accept such concepts as corporate authorship and conventional title. At the same time, their work must never become a merely mechanical applying of rules without an understanding of what these rules are about or, even more disastrous, with no understanding of the materials that are being cataloged. They must always understand that the purpose of cataloging is to make the

materials available to the public, not to make the materials conform to a set of rules. They must not expect the rules to cover every contingency, but must be prepared to build on the foundation of the code using their intelligence and their basic common sense when faced with any new cataloging situation.

3. No set of rules, however long and vehemently we debate it, can be perfect. As long as books remain the product of imperfect human activity, there can be no ideal set of rules for cataloging them.

The issue before the compilers of a cataloging code is this: Do we cling as closely as possible to what is on the titlepage? Or do we, using our own knowledge and that of experts in the field, modify the titlepage information to fit into a pattern of consistency? At the one end of the scale we have the growing practice of brieflisting by photographing the titlepage; at the other end we have the arrangement of the Bible and its books outlined in *ALA rules* 34. Between the two extremes a compromise must be made, a compromise that enables the library user to find his material with comparative ease, and which does not involve the cataloger in an inordinate amount of research. It helps the catalog user, for example, to find all editions of a musical work grouped under one title, but is it the function of the cataloger to go further than establishing a conventional title, and to arrange all musical works under opus number, Kochel number or the like? (see *Music Library Association Notes* September 1961, p. 559-562: "If we . . . start its filing title by statement of what it is rather than what it is called, we would probably be doing a service to the majority of catalog users." But can we always agree?)

Any cataloging code must be a compromise between the principles of consistency and convenience (but whose convenience? Surely not the cataloger's) There are bound to be areas of conflict. The exact place where the compromise is made seems to me not to matter very much. Rather than waste several more years of time and emotion and inaction, I suggest we encourage the publication of a Revised Code as soon as possible, so that we can all get on with applying it in our libraries (or *not* applying it, if we really dislike it heartily.)

Postscript

Cataloging of books is an essentially human activity, concerned with the products of human activity and the use made of them by human beings. The use of machines for information storage and retrieval will need revolutionary new cataloging codes, but they should be new codes, thought out again from the very start. No adaptation or modification of a present code can possibly serve the machines as well: we know before we start that these old bottles will not hold this heady new wine, and both wine and bottles deserve better treatment.

Mechanization and Subject Headings*

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ON HEARING THAT a grant by the Council on Library Resources had been made to the Library of Congress for a study of the possibilities of mechanizing the information system of the Library of Congress and large research libraries in general, the Cataloging Policy and Research Committee expressed the opinion that "the proposed survey at the Library of Congress is most intimately related to the need for a code for subject headings. To cope with the complex of subject concepts and the terminology required to express these concepts, under a scheme of automated storage and retrieval, a well-defined and adequately-stated theory of how the concepts are to be organized into a system, and how expressed is essential."

A brief word now about the conduct of the survey. The survey team** started its work in May, 1961. Meetings of an introductory or orientation character took place at the Library of Congress in May and June. Late in July, the Team met in Los Angeles and in San Francisco. In both cities visits were paid to the University of California libraries. In October, the Team reviewed its progress, meeting with an advisory group consisting of Drs. Fussler, Heiliger, Rogers, and Wagman.

The several meetings and discussions have covered a variety of library subjects, ranging from the problems encountered by readers; the physical storage and delivery of books; the problems of generating machine files to permit searches by author, title, and subject; through the problems of transforming past and future cataloging products into machine readable form. Much of these discussions was concerned with the ideal library of the future. These discussions were designed to highlight the character of our present procedures as well as the underlying functions that these procedures are designed to serve.

* Remarks addressed to the ALA Cataloging Policy and Research Committee, January 29, 1962.

** The Team consists of Dr. Gilbert W. King (Director of the Survey) Director of Research, International Business Machines Corp.; Dr. H. P. Edmundson, Ramo-Wooldridge; Dr. Merrill M. Flood, Professor of Mathematical Biology, University of Michigan; Dr. Manfred Kochen, Manager of Information Retrieval, IBM; Dr. Don R. Swanson, Manager of the Synthetic Intelligence Department, Ramo-Wooldridge; and Dr. Alexander Wyly, Director of the Military Systems Research Division, Planning Research Corporation.

The survey team has not yet submitted a report or recommendations, nor would it be proper to describe in any detail what I think its report or recommendations might be; but, by virtue of my participation in the work of the team, I can offer some comments with respect to some questions posed.

It would appear to me (and I should point out that I am speaking in a personal capacity now rather than as a representative of the Library of Congress) that mechanization, as viewed by the members of the survey team, involves the disposition of mechanical or electronic facilities to permit the continuation of present activities in a more economical, efficient, or improved manner. Mechanization does not necessarily imply radical alterations. To say this in another manner, a mechanized system can be hospitable to any number of different methods of subject control and organization of library materials ranging from our traditional methods to descriptors, unit terms, and other methods whose description abounds in the documentation literature. I would infer that if a code of subject headings, a manual of subject headings procedures, and a synthesis of existing theory of subject headings are desirable and needed, they are desirable and needed per se and not merely as a consequence of any impending mechanization. The prospects of mechanization, however, can provide added justification for the code, the manual, and theory.

Permit me, in the first place, to elaborate on the consequences to be derived from mechanization of traditional subject heading procedures. We would assume that subject catalogers would proceed in an unchanged manner to catalog books and other library materials, assigning established headings, establishing new ones as needed, and revising terms requiring change. Instead of finding entries under a given subject heading in a card catalog, we would expect to search for such headings in a machine memory through some appropriate search tool and search strategy. The essential change is not in the intellectual component of the complex devoted to providing subject control, but rather (as I am describing it) in the clerical or physical routines of capturing the results of the intellectual effort. By virtue of enlisting the aid of a machine, however, certain definite advantages are realizable.

The major advantage of mechanization is to be found in the ability of the mechanized system to respond rapidly to requirements for self-improvement and up-dating of the system.

Consider that in our present manual system, a change in a given subject heading for any of a number of possible reasons is more often than not an untoward prospect. Cards must be withdrawn from the files; they must be corrected and reprinted. Tracings must be searched. Cross-references must be traced and changed. Thus every change of subject heading is a complicated and expensive undertaking. Administratively, one must balance the cost of change against the cost of cataloging new books, or conversely, balance the loss from not making required changes against the loss from not cataloging new books. How often does the cataloging

of books take precedence over changing subject headings that have outlived their usefulness?

Evidence that change lags behind the need for change is to be found in the use of outmoded terminology and in the accretion of many hundreds of entries under a single heading above and beyond the optimum number that can be readily comprehended.

A proper machine system can make these changes quickly, economically, and with surprising economy of effort on the part of the professional cataloger. The economy is achieved by relieving the cataloger of the clerical component involved in his complicated routine and by permitting his efforts to be more usefully concentrated on the professional or intellectual aspects of his work. It would become easier to review a crowded heading for possibilities of subdividing or substituting several more specific headings when the literature on a subject begins to proliferate, or to develop a heading more responsive to current usage. This possibility is promised because the machine needs only to be programmed to respond with the new heading (or entries under the new heading) each time the old one is called for, or to provide entries under the old as well as the new whenever the new is requested. One can see, however, that the boon is not only granted to the cataloger but to the user as well by sparing him the task of laborious movements in response to the cross-reference chain that frequently substitutes for actual changes of headings or the equally difficult task of skimming through too many entries under too general a heading.

Although this description is speculative, one can find actual mechanized applications to existing systems and collections, albeit that these systems are more circumscribed or limited than the universal collections found in the large, general purpose research library. The system of the Armed Services Technical Information Agency (ASTIA) maintains a record in the machine each time a subject term is applied to a document. It is essentially a form of posting. A term used too frequently (more than 700 times) is examined to see whether it is too general, whether it should be broken down to its constituent terms if it is a combined term, or whether it should be retained in its existing form. The Medlar system now being designed for the National Library of Medicine has the requirement for the same capability. I would note in passing that the ASTIA system employs the use of so-called descriptors of which at least 80% consist of terms formerly contained in a list of science subject headings devised by its predecessor, the Technical Information Division in the Library of Congress. This opens the door to the interesting question as to the precise nature of the difference between subject headings and descriptors, unit terms, semantic codes, roll indicators, and similar adjuncts of subject terminology in use with mechanized systems. I don't want to digress on this topic but will want to say a brief word about these differences when I discuss subject heading theory.

Thus, with respect to the consequences to be derived from mechanization one should expect reduced time devoted to searching by the cataloger

to determine or select appropriate headings. One should expect a greater portion of the cataloger's effort applied to his proper intellectual function, with the system taking over more of the clerical routines and providing new benefits permitting continuing control of the system, its up-dating, and its responsiveness to current and continuing subject retrieval requirements. To exploit these advantages, a proper code and guide to standard procedures will be indispensable. One of the necessary conditions for economical mechanization is processing of large quantities of information. I would guess that more than one library or library system will be involved in these developments. Without common standards, the system will not be able to maintain itself nor serve its intended goals.

I should like to stress that the advent of mechanization will require detailed feasibility studies which must meet potential criticism by proponents of novel or non-conventional methods of subject organization. None of us is unfamiliar with criticism which characterizes traditional library procedures as slow, perfectionist, inefficient, unresponsive to the needs of scientific research, and lacking depth of analysis or indexing, all of which might, however, be changed by the machine and by new, indeterminate methods which the machine makes possible. The indispensable tool for the assessment of such criticism, and for the ability to place such criticism in proper perspective, is a corpus of theory which provides a common framework of reference for both the traditional and the newer methods of subject organization.

I recently experienced a startling insight upon reading an unpublished paper describing a contemporary large mechanized system in which the enumeration of problems experienced by the system represented virtually a one-to-one correspondence with the enumeration of problems encountered in our traditional subject heading practices as described by David Haykin in a paper contributed to the 1952 symposium at Columbia University. In the absence of a proper body of theory, all comparisons between systems reduce to a level of more or less incoherent arguments which refer in the main to practices and rarely touch the underlying functions. In all too many instances, the underlying functions are common to a variety of systems, all laying claim to novel attributes.

It should go without saying that the full elaboration or synthesis of a theory, or code, of subject heading analysis provides a most useful point of departure for the understanding of alternative systems and, even more significantly, will permit useful contributions to the fruitful development of such systems, a development from which our trained and experienced catalogers are now virtually excluded.

Another point to bear in mind considering the influence of mechanization on the development of a proper theory requisite for comparison and understanding of other systems, is that there is no monopoly on mechanization. Conversely, the need for communication ultimately leads to a need for compatibility among diverse systems. We are now witnessing efforts to achieve compatibility in the work at ASTIA to achieve a uniform thesaurus of descriptors suitable for use within a

diverse community of special libraries. At the same time attention is being given to the need for compatibility between the terms designed for use in the mechanized system and those used for a manual system, when both involve description of similar collections of documents. At still another level, efforts are being initiated to develop compatible coding of subject terms for machine use so that the work expended in processing documents for one machine system can be utilized in another system consisting of different machines and possibly different applications.

Thus, to summarize, I have speculated that any future mechanized system would, in principle, be hospitable to traditional subject cataloging methods; that mechanization will have effects on our known way of operating with traditional subject headings; but that the full development of a code or synthesis of applicable theory of subject heading analysis would be a most useful tool in perfecting the understanding of our traditional methods, that such theory can contribute to the development of non-conventional methods and use the task of mechanization.

Later Report on *BPR*

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WHEN THE *BPR* was still in its nascent stage, reviews in *Library Resources and Technical Services* were foretelling its values and shortcomings. Its potential usefulness was recognized by librarians representing libraries large enough to warrant a technical processes department, but its pre-publication acclaim may not have reached smaller libraries. It has now been in publication long enough to justify a further report.

It is the policy of the Colorado State College Library to rely upon the faculty for about 95 per cent of its book orders, the Librarian's book acquisitions being restricted almost entirely to the procurement of recent publications in the field of education. The *BPR*, with its Dewey Decimal arrangement, is a time-saver for the Librarian, as well as any subject specialist who wants to keep up with publications in his field. The faculty run across the books they order in professional periodicals and publishers' advertisements; and titles come their way through a variety of other channels. The result of all this diversification is that many titles are so obscure and recent, they are often difficult to verify in the popular and standard lists. Since 85.9 per cent of the faculty orders are for books

published in the current year, the most recent lists are of great importance; even a month makes a great deal of difference.

After using the *BPR* for over a year, our order file was checked for that period of time to ascertain how much sooner titles had appeared in the *BPR* than in the *CBI*. The degree of accuracy and completeness of information for acquisitions purposes was also compared. In a check of 193 random orders, it was found that 68.9 per cent were listed in the *BPR* from one to eight months in advance of their listings in the *CBI*. Eighteen and six-tenths per cent were listed in the *CBI* one to two months sooner than in the *BPR*, and nearly one third of these lacked complete information, such as the LC number and the American edition. As an example of discrepancy, one main entry* in the April issue of *CBI* was entered under the corporate body while in the *BPR* it was under the editor, the *BPR* entry, of course, matching that of LC. This could easily result in duplicate ordering in cases where one librarian would happen to use only the *CBI* and another the *BPR* to verify the entry. The LC entry is not always adopted by all librarians, but LC cards are preferably ordered according to their entry, and it helps to have order files match. After a book with its cards is forwarded to the cataloger, the main entry can be changed. Twelve and a half per cent of the titles were listed simultaneously in both. The *BPR* contains a larger percentage of current listings than the *CBI* since it has the advantage of being published monthly. July, August, and December, when *CBI* is not published, are the very months a college library normally does its heaviest ordering. Only three books could not be verified by both; two were in *BPR* and one in *CBI*.

The new *BPR* not only includes all the bibliographical information the *CBI* contains, but it has two additional features: the short identifying annotation of each book, and, for the benefit of smaller libraries, the suggested Dewey classification number. To avoid possible duplication, as noted above, the most important cataloging information for ordering purposes is the correct establishment of the entry. The LC card number is also important. One great advantage of *CBI* over the *BPR* (in addition to its multiple entries) is its cumulative volumes which save many hours of searching for older and undated orders. The Bowker Company would do well competitively to provide a cumulative service, not only of its index, as one early reviewer suggested, but of the entire publication, if it is to be recognized by the library profession as *the* acquisition and cataloging panacea.

*Solomon, Philip. *Sensory Deprivation*. Cambridge, Harvard University Press, 1961. 262p.

Catalog Sleuthing, or, the Great Detective Game*

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THE "FLOATER", that elusive card for which a book no longer exists, poses a problem which is common to all libraries. Although we had been aware for some time in the Cedar Rapids Public Library that our catalog contained floating cards, only recently did we begin a concerted attack. A set of books called *Ideas Which Have Influenced Civilization* really started it all. The set had been cataloged with many analytics, and when it had been discarded, the tracings for several volumes had been either lost or overlooked. Consider what a wide range of subject matter "ideas which have influenced civilization" could cover; it seemed to us that every time we pulled out a drawer in the catalog, another "idea" came to light. We began to wonder how many other cards over the years had become floaters, and made a casual check. We found enough to make us decide upon a drawer-by-drawer search.

Such an undertaking has had to be worked into a busy department schedule; our job is only well begun. But in less than a year we have pulled an estimated two thousand floaters. The Director of our Library estimates that at our present rate it will take twenty years to complete the project! However, since the floater pulled from the drawer being checked frequently leads to the pulling of one or more floaters from other drawers not at the moment scheduled for checking, the number of cards which will need pulling in later drawers should progressively diminish, and so we hope to gather speed as we go along.

In undertaking a search for floating cards, it is obviously not possible to check the authenticity of every card. Several things may cause us to be suspicious. Sometimes cards are dirty, or the age of handwritten cards makes them suspect; but the cards for a classic which has been re-bound may look old but be still current. In our catalog probably the largest number of floaters are analytics. In the past, analas were made rather generously for plays, short stories, biography, as well as for subject fields.

* Talk given at the October 20, 1961, meeting of the Technical Services Division of the Iowa Library Association.

These were usually traced individually on author cards, but sometimes the tracing merely said "anals for contents", and occasionally even the "anals for contents" note did not get typed. For some years, during which the catalog department felt most severely the pressures of a growing library, the pulling of cards for lost and discarded books was regarded as "busy work" to be done by the non-professional members of the circulation staff. Much of that pulling was not revised by a member of the catalog department, who would presumably have been aware of some of the less obvious omissions. Anals were frequently missed in such pulling.

Another source of floaters is revision of subject headings without change of tracings. At a time when our Library was using both Library of Congress and Wilson cards, discrepancies in subject headings not infrequently necessitated changes. The hard-pressed cataloger might well feel that if she made a reference READERS AND SPEAKERS, see ELOCUTION, or WIT AND HUMOR, see HUMOR, the tracing itself would not have to be changed, since the person pulling the cards would look under the new subject heading, as directed by the "see" reference. Such an assumption failed to take into account human fallibility, and floaters inevitably resulted. Likewise, when variant subject headings were traced on the back of author cards but the unused Library of Congress headings were not crossed off the face, the searcher sometimes failed to see the tracings on the back.

One of the most annoying sources of floaters has been the use of a title card not traced on the L. C. card. Apparently, for a brief time in the Cedar Rapids Public Library, title cards were made for *all* books, even if the title was a duplication of the subject heading, as PERSONNEL MANAGEMENT; or if the title consisted of the name of a person, as "George Washington Carver", which of course would have a subject card under CARVER. Perhaps it was by accident that such titles were not traced, or it may at one time have been policy to make title cards for all books without tracing them. Whatever the reason, we now find it necessary to look for a title card for every book, whether title is traced or not. We have also found that cards for editor, translator, or joint author are sometimes overlooked in pulling. In our catalog we file such cards after those for an author's primary works, instead of interfiling them as some catalogs do. The inexperienced searcher can easily miss such a card.

Floaters also result from typing errors, such as "problems of" instead of "problems in", Elwood in place of Ellwood, or the American spelling when it should have been the British, as "traveler" for "traveller". Even misfiling can cause a card to be overlooked, as Browne filed among the Browns. We like to feel that such errors won't occur when *we* are revising, but the humbling fact is that they do.

A different kind of floater is that caused by pseudonym references to authors no longer in the catalog. In earlier days no tracings were made for these, and there was no author authority file. Now we have an author authority file, and a tracing of the "see" reference is also made on each au-

thor card. Floaters may result from our inability to keep up with "see" and "see also" references, as subject headings become obsolete or change, or no longer have material listed under them. Here the circulation staff can be of great assistance. A note from a colleague may read, "There is a 'see also' reference from SPIRITUALISM to APPARITIONS, but nothing in the catalog under APPARITIONS". An alert circulation assistant will sometimes discover inaccuracies and discrepancies of which the catalog department is unaware. (It needs to be made clear to the new staff member that we want a note about a floater, or a mis-filing, or whatever it may be, and not the card itself.) Even the public itself often unwittingly helps to find floaters. If a book on handwriting analysis was discarded in 1920 and a card for it by chance became a floater, some sixth sense seems to cause the library patron to choose that card!

We sometimes find an entire set of cards in the catalog for a book which is no longer in the library collection, and we can only surmise how this came about. In our catalog we are still finding cards for the Smithsonian Institution *Reports* for 1907, 1908, and 1909, although we have already pulled almost a hundred floaters for this title. Or cards turn up for titles labeled "pam." or "pam. box", although it is many years since pamphlet file materials have been listed in the catalog. I have even heard the rumor that a staff member of some years ago, whose tenure was fortunately brief, when given a group of books to discard, simply tossed them out, without sending any records to the catalog department. Let us hope this is only a rumor.

And so I come back to the title which I selected in a rather flippant moment: "Catalog Sleuthing, or The Great Detective Game." It is detective work which enables the alert librarian to find a floating card, though you may prefer to call it intuition, or an "educated guess". And it is a game, if a game is something one does for fun. There is a genuine satisfaction in having one card lead to another, from drawer to drawer, until you have acquired a sizeable pack of old, dirty, useless cards. But even greater is the cumulative reward which comes when you can use your catalog with confidence that the cards which you find there are current, and among them only rarely a floater.

INSTITUTE ON INFORMATION RETRIEVAL

The University of Minnesota, through its Library School and its Center for Continuation Study, has announced an Institute on Information Retrieval to be held September 19-22, 1962. It will be under the direction of Wesley Simon-ton. Registration fee will be \$15.00 which includes four lunches. For further information write: Director, Center for Continuation Study, University of Minnesota, Minneapolis 14, Minnesota.

Reclassification for the Divisional Plan

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CALL IT INCIDENTAL reclassification (Tauber)¹ or partial (Moriarty)² as you prefer, but let's face it: most of us eventually have to do a little or a lot. Here is an account of how one college library is managing to accomplish such a project. As Tauber³ has implied, exact costs are difficult to determine and comparisons somewhat unfair. This paper will not recapitulate the principles laid down in the literature on this subject, nor will it cite all of the articles discussing reclassification in various libraries. All I hope to do is to offer some encouragement to other librarians faced with the necessity of doing some reclassification without extra staff.

The Background

Humboldt State College is planning a new library building in which the collection (ca. 70,000 volumes, Decimal classification, open stack) will be arranged by large subject areas—the divisional plan.⁴ To avoid confusion for the Library's patrons, it was decided to keep the book stacks arranged in the order of the Decimal classification and to limit the relocation of any blocks of numbers to an absolute minimum. However, local policy had been to classify all "study and teaching" with the special subject studied, all collective biography in 920, and individual biography in 921. These local practices, together with several standard D.C. locations, obviously placed many books in the wrong divisional areas.

The Decision

A rapid survey of the classification and consideration of the curriculum indicated that it would be necessary to reclassify study and teaching of special subjects on the elementary and secondary levels to bring them into the Education and Psychology Division, to reclassify most collective and all individual biography to the pertinent subject areas (this last not without some lively argument and misgivings on the part of the Head Cataloger), to consolidate most of the special reference books with the circulating collection, and to reclassify all decimal subdivisions of 016 to the pertinent subject number with 016 as a subdivision (an alternative arrangement of bibliography suggested by Dewey himself). Some smaller projects were: possibly consolidating conservation materials now scat-

* Formerly Head Cataloger, Humboldt State College Library, Arcata, California.

tered in 333, 339, and 591.61; taking all folklore and legends of literary value out of 398 and classing them in literature; reclassifying school readers from 428.6 to 372.412; reclassifying most of 616.8 and 618.92 to the 130's or 150's; and possibly attempting to consolidate anthropological and archeological materials now in 571-573, 913, 970, and 980. It is interesting to note that many of these relocations were similar to those arrived at by Ashton and Hansen.⁵

Quick scanning of the shelflist in all these areas gave us a good estimate of the number of volumes (about 5500) which would need examination, although a fraction of them might prove not to need reclassification. The decision was made to proceed with the project as time allowed. Priorities were set up, with study and teaching of special subjects heading the list. About 900 volumes in the 07 subdivisions would have to be examined, and those on elementary or secondary level reclassified.

The Method

In the summer of 1959 no increase in regular staff was possible, but some money was available for extra student assistants toward the end of the fiscal year. For a few weeks between the close of the spring semester and the beginning of summer session the library would be empty of all but the most devoted patrons, and the public services staff could forego the usual housekeeping chores of that quiet time to help with reclassification.

While most of the staff worked on taking inventory of the book collection, the Head Cataloger reread books and articles on reclassification, wrote out certain decisions on classification policy, and made out special expansions of 372 and 373 to accommodate elementary and secondary school subjects. Faculty members of the Education-Psychology Division were consulted as to the best location of certain subjects; for example, they recommended placing conservation education as a subdivision of social studies in the elementary field but under science in the secondary field, in line with California school practice. Copies of the outlined reclassification procedure, the special 370 schemes, and policy decisions were made ready for each staff member.

Each professional librarian (except the College Librarian and the Head Cataloger) was assigned a section of the shelflist to read for "study and teaching" material. All such shelflist cards were pulled, except for titles obviously above the secondary level. A student assistant went to the stacks and loaded the books on a truck. A clerical assistant searched for circulating volumes in the charging files and placed "holds" on the book cards. Books and cards went back to the professional librarians, who examined the books and sent back to the stacks any that turned out to be better left in the old class. Such books were briefly annotated to show the reason for the decision. Worn and out-dated books were weeded at this time.

To reclassify a book, the professional staff member put a temporary slip in the shelflist under the preferred 370 number to prevent conflict of

book numbers, then penciled the new call number on the verso of the title page and on the shelflist card. Statistics were kept as required by the library's cumulative records. Books were given to student assistants who used electric erasers to remove old call numbers. Then a highly accurate typist put the new call numbers on the book cards, typed new labels for the spines, and put the new call numbers on the book pockets with pen and ink. At the same time other assistants, working from the shelflist cards, were typing removal slips to substitute for author cards in the public catalog. Complete sets of cards were pulled from the public catalog by any staff members available and capable, whether professional or clerical. Again the reliable typist was depended upon, to check that all cards of a set were in hand as she changed the call numbers. (Experience showed that series cards should be kept in a separate file, accessible to the typist as she comes to each "Series" tracing). Students pasted the new labels on the books. The catalogers had qualms about sending books and cards out again without checking them against each other, but the remarkably small number of errors turned up during the next year proved the competency of conscientious staff members who knew that their work would not be revised and were thereby impressed with the necessity of accuracy.

During all this activity the Head Cataloger helped make difficult decisions on classification, tried to keep work flowing evenly, and followed up on volumes, copies, or titles not located immediately.

The Results

Seven hundred and sixty-eight volumes were reclassified during June of 1959. In the early summer of 1960 the total project was given another push when 1264 volumes of biography were reclassified by the same general procedure. In 1961 the training of a new staff to take inventory and a shortage of student assistants made it impossible to do any reclassification. It is hoped that succeeding years may see further progress.

At the beginning of each summer's project, staff members were asked to keep track of time, in hopes of getting some valid figures on the labor cost per volume. But reporting was felt to be so subsidiary to getting the work done, that a scrupulous separation of professional from clerical duties and accurate record-keeping went by the board. Student assistants or extra clerical employees were not always available when needed to keep certain bottlenecks from developing. As a result, professional staff members sometimes went to the stacks to examine and gather the books, or pulled cards from the catalog when needed. Some students left on vacation unexpectedly without turning in the record of hours spent on various tasks; these figures have been estimated.

Statistics

As has been explained above, the following figures do not accurately portray the proportion of professional to nonprofessional *tasks*. The larger proportion of professional time consumed in 1959 was partly

caused, however, by the necessity of examining the shelflist to catch all "study and teaching" books, while in 1960 the work (biography) was already segregated.

	1959	1960	Total
Volumes reclassified	768	1264	2032
Titles reclassified	691	1138	1829
Hours spent by staff			
professional	207	239	446
clerical	135	134	269
student	65	87	152
Total	407	460	867
Average number of volumes per man-hour	1.88	2.75	2.34
Average number of titles per man-hour	1.69	2.47	2.11

Recommendations

As a result of this experience, I suggest that anyone wishing to keep accurate figures on labor costs of reclassifying should prepare forms on which each staff member might keep a time record by type of work done, as in job analysis. Such a form should show the time required for professional and nonprofessional duties regardless of the actual assignment to staff members. Actual labor costs could be calculated from the salaries or wages of the staff members signing the forms. A good deal of indoctrination seems to be necessary to explain to all concerned the use that will be made of the statistics and the importance of keeping track of the time by function performed.

Materials costs should be negligible. The few new book cards and pockets used would probably have had to be replaced in the course of normal library operations. Labels and electric eraser refills may be counted. Overhead is notoriously difficult to calculate, but could perhaps be estimated from the number of man-hours as a portion of the total man-hour budget for the year.

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Form Division in L.C. and D.C. Classification Schemes

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THE EMPLOYMENT of form divisions in the L.C. and Dewey Classification schemes present revealing likenesses and differences. Before we discuss actual cases, however, it is necessary to draw several distinctions in the use of the term "form" in form divisions.

(a) "Form" can refer to the particular arrangement or method of treatment of a work (pure form). (b) "Form" can refer to the range or scope of the subject or subjects covered in a work (general form). For example, a work which deals with the theological, legal, and economic aspects of religion would be placed under this category. (c) "Form" can refer to the particular point of view or aspect by which a subject is treated (general special). An example would be a history of botany.

In general, the use of form divisions in L.C. follows the first definition of "form," but in D.C. the classic nine form divisions are really subdivisions of classes which are applicable to all or almost all of the ten classes—or, if you will, a mixture of pure form, general form, and general special categories.

After a study of all classes in both schemes, I would like to submit one class as typical of the other classes for an analysis of the difference in the use of form divisions. Listed below in tabular form are the relevant D.C. and L.C. schedules for political science, the L.C. schedule slightly abbreviated:

<i>Dewey Classification</i>		<i>Library of Congress Classification</i>	
320	Political Science	JA	Political Science
320.1	Theory	1-26	Periodicals
320.2	Compendis, Statecraft	28-34	Societies
320.3	Dictionaries	35	Congresses
320.4	Essays	36-49	Collection of monographs and collected writings
320.5	Periodicals		Yearbooks
320.6	Societies	50-59	Encyclopedias
320.7	Education; study and teaching	61-69	Theory, method (politics as a science)
320.8	Polygraphy		General
320.9	History	71	Relation to law, sociol- ogy, etc.
etc.		75-80	History of political science
		81-84	Study and teaching
		86-89	

(Remarks: Under periodicals L.C. divides by country or area. In addition, societies, yearbooks, and encyclopedias are divided by country in L.C. Both D.C. and L.C. divide history by country. Political theory receives a separate class schedule in L.C., namely, JC.)

It is possible to analyze the use of form divisions in the two schemes under the following four categories:

1. The order or position of the form divisions within each class.
2. The notation used in representing form divisions, including the rationale behind the employment of form divisions.
3. The relationship of the form divisions to other categories used in the schedule, e.g., geographical and chronological divisions.
4. The comparative value of the form divisions as used in L.C. and D.C. That is to say, which of the two systems uses form divisions to their maximum advantage?

First let us consider the position or order of the form divisions within a class. In L.C., form divisions usually precede the general form and general special divisions of a subject. In D.C., the general categories come first, the pure form and general special divisions follow. For example, a general work in political science would be classed 320 in D.C., a periodical in political science 320.5, etc. In L.C., a general work in political science would be classed JA 71 if it dealt with politics as a science¹, a periodical in JA 1-26, etc. Often in L.C. the general divisions are divided by date so that earlier material is kept separate from more recent material. The year 1800 is commonly used. The general form category in D.C. is rarely comparable to the general category in L.C. since L.C. frequently uses the general category as a subdivision of a form division. For example, in L.C. the form division "Study and Teaching" under political science is subdivided by a general category as well as by country and school categories. In brief then, form divisions usually follow the general divisions in D.C.; in L.C. form divisions usually precede the general.

Second, the notation in D.C. is the same for all form divisions unless the form divisions are inapplicable to the subject, as in history. Furthermore, there are adjustments made in the meaning of the notation to fit the subject. For example, ".8" usually stands for collected works in a subject but under 600, ".8" represents patents and inventions. Nonetheless, the numbers are significant notwithstanding their use under a particular subject, i.e., they are mnemonic. In L.C. the notation is non-transferable from one schedule to another, but the order of the form divisions under a subject is relatively uniform. The rationale of the use of form divisions in D.C. is intimately connected with the notation or mnemonic device. As we know, the source of the form divisions in D.C. lies in the general class of D.C.:

¹ A general work in the sense of covering the entire field of political science would probably be classed JA 66-69.

000 General Works

- 10 Bibliography
- 20 Library science
- 30 General encyclopedias
- 40 General collected essays
- 50 General periodicals

Form Divisions

- 01 Theory, philosophy
- 02 Compends, manuals
- 03 Dictionaries, encyclopedias
- 04 Essays, lectures
- 05 Periodicals

On the other hand, the order of form division in L.C. vary to fit the subject, but it is usually as follows:

- Periodicals
- Yearbooks
- Congresses, societies
- Sources, documents
- Dictionaries, encyclopedias
- Laws, regulations
- etc.

Neither history nor theory are considered as belonging to form divisions.

A glance at the D.C. tables indicates that Dewey was so enthralled by his mnemonic instruments that these determined more than anything else (except for the ten main divisions) the nature of his classification scheme. Indeed, the notation is possibly more important than the classification itself. L.C., on the other hand was concerned primarily with classification and not with the notation used to represent this classification. Hence, L.C.'s theory behind the use of form divisions is both more logical and more practical than in D.C. In short, its rationale is functional, while in D.C. it is mnemonical. If this is so, certain consequences follow. In L.C. pure form divisions are clearly distinguished from the general and general special divisions of the same subject. Furthermore, a close examination of the various schedules show that L.C. utilizes a much larger number of pure form divisions than D.C. It is true, that D.C. did make provisions for additional form divisions,² but this considerably diminished the scheme's mnemonic prowess and economy of marking. That is to say, in D.C. the lure of mnemonics and the attempt at brevity in marking led to difficulties, such as the blurring between pure form divisions and non-form divisions, and long notation numbers. In addition, since the form divisions in D.C. are relatively inflexible, the subject is squeezed to fit the form divisions unless utterly inapplicable.

The third point of comparison deals with the relationship of the form divisions to the other categories used in the schedule. However, mention should first be made of one form division used by neither D.C. nor L.C., namely "bibliography". The question naturally arises whether the bibliography of a subject is to be classed with the subject or with a general bibliographical schedule. L.C. makes provisions for both arrangements (subject or Z schedule). Those libraries using D.C., on the other hand, would require special devices (such as the use of letters) or the shelving

² This table is printed in front of the schedules in the 16th ed.

of relevant works in the 016 class before each subject, if it chose to shelve such books with other books on the same subject.

In L.C., form divisions are divided geographically or chronologically whenever feasible. Furthermore, when applicable, form divisions in L.C. are subdivided by a general or a general special category. In D.C., form divisions are generally undivided in the main schedules. In order to obviate this real problem, however, a number of optional provisions are made for geographical and other kinds of subdivisions under form divisions in the 16th edition of D.C.³ Because L.C. is as much a geographical and chronological system as it is a topical system, the relationship of form divisions to other categories is both integral and flexible. Contrariwise, because D.C. is primarily a topical scheme, this interplay between form divisions and other categories is difficult to achieve without violating the whole system.

Finally, we can legitimately ask which of the two schemes uses its form divisions to the maximum advantage. In L.C. almost every class, subclass, and section has its form divisions and vice versa. This exemplifies the pragmatic drive behind L.C., namely, "the way in which books actually grouped themselves". As a result, L.C. is much more comprehensive, expansive, and flexible than D.C. The dividing line between classes, subclasses, and sections is relatively clear and unambiguous.

D.C. is unable to match L.C.'s use of form divisions, because the scheme is limited by notational and mnemonic considerations. In D.C., the form divisions are simply subdivisions that are generally suitable to the main classes.

In conclusion, it can be said that this disparity in the maximum utilization of form divisions is the logical outcome of the other differences discussed above.

³ A prior attempt in the 14th ed. was handicapped by excessive complexity.

TRANSLATION ACTIVITIES

The Special Libraries Association has compiled a *Survey of Translation Activities in the Universities, Societies and Industry in the Fields of Science and Technology*.

The survey was supported by a grant from the National Science Foundation, covers the years 1955-59, and indicates how to obtain translations of 678 research organizations in the U. S.

A limited number of copies are available for borrowing from the Special Libraries Association Headquarters, 31 East 10th St., New York 3.

Patron Use of the L. C. Classification

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A STUDY OF PATRONS was included in a general investigation of use of the L.C. classification completed in May 1961.¹ Two points of view were expressed: patrons described their search for material on the shelves, and public service librarians gave their opinions of the extent to which the patrons that they serve need and receive assistance.

Special, college, university, and public libraries use this classification. The sample of 158 librarians is representative of the librarians who use the classification, but the sample of 476 patrons is not. More special libraries (54.7 per cent) are listed as having materials classified with this system, but only one consented to ask patrons to participate. More university patrons (71.4 per cent) who were graduate students (59.8 per cent) responded. The results are presented, in spite of these limitations, for the following reasons: (1) universities and colleges probably serve the largest number of patrons using this classification, (2) this report includes a greater variety of patrons than any found in the literature, (3) the results suggest that the type of library is not a significant factor in patron use of the classification.

Questionnaires were distributed to patrons as they approached the shelves in three university libraries (Boston, Temple, Tennessee), three college libraries (Claremont, Swarthmore, Williams), one public library (St. Paul, Minn.) and one special library (McCormick Theological Seminary). The public service librarians received and returned their questionnaires by mail. The opinions of the two groups are, therefore, independent of each other.

Responses of 476 Patrons

	Percent of Total answering question
Length of time classification had been used:	
A year or more	69.7
Less than a year	30.3
	100.0

¹ Hoage, A. Annette L. *The Library of Congress Classification in the United States* (Unpublished D.L.S. dissertation, School of Library Service, Columbia University)

Amount of instruction received:	
Individual instruction in library	59.9
No instruction	47.3
Class instruction	12.8
	100.0
Reasons for shelf search:	
Specific title	60.0
Subject	36.4
Title and subject	3.6
	100.0
Source of classification information:	
Dictionary catalog	59.0
Other: Classified catalog, shelf list, book catalogs and lists	41.0
	100.0
Information known before shelf search:	
Call or classification number	74.0
Location of material	26.0
	100.0
Results of shelf search:	
Found material	85.2
Found related material - 32 per cent	
Did not find material	14.8
Material not on shelves - 95.5 per cent	
Call no. not understood - 4.5 per cent	100.0
	100.0
Sought help in search	9.5

The patrons described their shelf search, not their visit to the library. Their approach to the catalog by author, title, or subject was not investigated.

Opinions of the Librarians

Approximately 41 per cent of the public service librarians in this sample estimated that more than half of their patrons need assistance in using the classification. Most of the librarians believe that the average patron is not aware of the subject approach provided by the classification and is ignorant of the full meaning of the call numbers.

The most commonly-used method of teaching patrons is that of informal, individual instruction. Other methods were talks to graduate students in their departments, films, manuals and guides, exhibits, signs and charts.

Conclusions and Suggestions

In no instance did the opinions and practices of the patrons in a specific type of library differ from those in other types. Most of the patrons

used the classification as a location device. They usually found what they wanted, and only 9.5 per cent sought help for the search that they described. However, 72.7 per cent of them indicated that they had received instruction prior to their search.

Instruction on an informal, individual basis was reported by 59.9 per cent of the patrons and 93 per cent of the librarians. The question raised by these figures is whether or not this type of instruction is effective for teaching the number who need it. Although the individual approach is an excellent one and would be required to supplement any other methods, group plans would save more time and give better organized instruction to a greater number of patrons. Lectures could be given on phono-records, tapes, films, or television sets to large numbers of patrons. The use of audio-visual aids increases perception, assures uniformity, and provides for evaluation and improvement.

Professional help in developing a program is often available. Enlisting the aid of college and university faculty members can be an indirect way of teaching them and extending instruction beyond the freshman level. Information that might be of value to upperclassmen and graduate students includes an analysis of how their subject majors are treated in the classification, how the subdivisions in the classification compare with the arrangements in the important bibliographies in their fields, how materials in related fields are classified, and how this classification differs from other systems. Classifiers should assist in planning the courses and teaching the units whenever possible, because classification might be appreciated as a useful bibliographical tool if it were discussed by librarians who fully understand and can interpret its value.

Next Steps

More extensive study of individual patrons is needed. Case studies could provide information that it was not possible to obtain through use of a written questionnaire, such as: (1) the patron's typical behavior—visits made to the shelves compared with those made to the library; (2) the approach to the shelves—origin of the search, comparison of the terminology of the patron with that in the schedules, substitutions made by the patron; and (3) factors contributing to patron adjustment and maladjustment in each situation. More information is needed concerning instruction beyond the freshman level.

Cooperation from special librarians will have to be obtained before a complete analysis of use of this classification can be made. It is used in more special libraries, and yet academic librarians participated in greater numbers.

A Simplified Record System for Binding Preparation

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COMMERCIAL RECORDS ARE LIKELY to become unwieldy and unnecessarily complex if they are allowed to grow without periodic review and re-evaluation. The volume of work to be handled in an office system usually increases, and new operations and refinements are added. Along with this growth process, certain routines may be dropped or transferred to another office. The original purposes for which a record was devised are often forgotten, and additional files are constructed to meet the new needs. In time, it may be found on re-evaluation that a number of separate files are being maintained where one simplified record could answer all needs, with a corresponding reduction of the staff time needed for record maintenance.

In 1960 the binding preparation records of The Ohio State University Libraries were reviewed and revised. A description of the revised record and procedure follows, in the hope that some of the ideas may be applicable to binding preparation procedures in other libraries.

The system in use before 1960 was somewhat complicated by the fact that about two-thirds of the library binding was done in a bindery in the Main Library building, and the other third was sent to a commercial, off-campus bindery. Each departmental librarian was assigned a monthly quota for binding in the library bindery and a separate quota for commercial binding. The departmental librarian was responsible for selecting volumes in need of binding, typing binding slips in duplicate (designating the proper binder by the color of the binding slip), and sending all binding to a central Bindery Preparation Division for further processing. The Bindery Preparation Division (a) checked each volume for completeness, (b) prepared binding instructions for each volume, indicating the correct lettering, color, volume number, and similar information, and (c) filled in a continuing binding record of each title, giving the volume and year, the date sent to the bindery, and later the date returned. In addition, volumes sent to the commercial bindery were typed on a shipping list in duplicate, one copy of which could be retained, while the other was included with the shipment. Page collation, removal of staples, advertisements, and covers, and separation of supplements was done in the Bindery Preparation Division for material to be bound in the library bindery. In the Bindery Preparation Division the following files were maintained:

1. A permanent alphabetical file of all serial titles bound in the library bindery, giving a continuing binding record.
2. A permanent alphabetical file of all serials and sets previously bound in the library bindery, giving collating and binding instructions and pattern number.
3. A temporary file of serial and monograph volumes currently in the commercial bindery, filed alphabetically under shipment number; after these volumes had been returned, the slips were refiled into file 5.
4. A temporary file of non-serial titles currently in the library bindery, filed alphabetically under shipment number; these were refiled into file 5 after the bound volumes had been returned.
5. A permanent alphabetical file of all titles previously bound and returned from the commercial bindery and all non-serial titles previously bound and returned from the library bindery, as a record of the date sent and returned from the bindery (file # 1 serving this purpose for serial volumes bound and returned from the library bindery).

Revised Procedure—Serials

In the simplified system, only one file is maintained for all serial titles, arranged by call number. Those regularly bound at the commercial bindery are interfiled with those regularly bound at the library bindery. Each card gives the binding title, color, department library, call number, name of bindery, special instructions, binder's pattern number, and a continuing record of volume number and year, date sent to bindery, and date returned. The departmental librarian is not responsible for designating the proper bindery nor for typing any slips for serial volumes, but merely sends the volumes to be bound to the Bindery Preparation Division. A clerk in this division arranges them by call number, pulls the proper cards from the file, enters on each card the volume number, the year, or other designation that is to be stamped on the third panel

QC 1 36793	OUT	OUT	OUT	OUT
TITLE Soviet Physics. Solid state				
AUTHOR				
INSTRUCTIONS: Use Russian original dates on spine Bind one list of abbreviations in each vol. at the end of vol.				
O.S.U.				
S-928 Blue Physics				
VOL. PART, YEAR SENT RET'D				
12				
11				
4				
3 2, 1960, Jan-June 7-28-61				
2 1, 1959, July-Dec. 7-12-60 9-13-60				
1 1, 1959, Jan-June 7-12-60 9-13-60				
OHIO STATE UNIVERSITY PL 51822 VISIrecord, Inc. COPIAQUE, L. I., N. Y.				

BX 940 R45	OUT	OUT	OUT	OUT
TITLE Revue d'histoire ecclésiastique.				
AUTHOR				
INSTRUCTIONS: Bind 'Bibliographie' separately under: BX 940 . R452.				
Comm.				
2121 Red-3318				
VOL. PART, YEAR SENT RET'D				
12				
11				
3				
2 55, 1960 8-9-61				
1 54, 1959 10-11-60 1-20-61				
OHIO STATE UNIVERSITY PL 51822 VISIrecord, Inc. COPIAQUE, L. I., N. Y.				

of the spine, and the date of the next shipment, separating the volumes for the commercial bindery from those for the library bindery. Instead of filling out a binder's specification slip, the clerk makes a Photoclerk (3" × 5") copy of the binding card, since all information required by the binder is given on this card. After a title has been bound the first time, and the binder has made a pattern, he is interested only in the pattern number and the volume and year. Therefore these figures are written large and clear on the binding card, so that they will be easily legible to the binder on the reduced Photoclerk copy. If several volumes of the same copy are sent to the bindery in the same shipment, each volume must be entered on a separate line of the binding card, although several volumes that are to be bound as one volume are entered on the same line. In other words, the binder will follow the volume numbers and years given on the Photoclerk slip. When several volumes of the same copy are sent in a shipment, a Photoclerk slip is made for each volume, masking out other volumes listed above or below. All volumes sent in previous shipments are also masked out; we enter volumes on the lowest line of the cards, moving toward the top, in order to simplify masking. These Photoclerk slips are inserted in the proper volumes, to serve as instructions to the binder. The binding cards are returned to the file.

Where we formerly typed a shipping list in duplicate, listing alphabetically all titles sent to the commercial bindery in a shipment, we now make an extra Photoclerk copy of each title. This set of Photoclerk copies is sent to the binder in a separate packet, serving as a shipping list. A shipping list has never been required for volumes sent to our library bindery, and we do not make extra Photoclerk slips for these volumes.

Revised Procedure—Monographs

In sending monographs to the Bindery Preparation Division to be bound or rebound, the departmental librarian is asked to enclose a white 3" × 5" slip with each title, listing call number, author, title, volume number, and library to which the bound volume is to be returned. A Photoclerk copy is made of this slip in the Bindery Preparation Division and is inserted in the book to be bound. For books sent to the commercial bindery, a second Photoclerk copy is made to serve as a shipping list.

Handling of Returned Shipments

When a shipment is returned from either of the binderies, the Photoclerk slips are enclosed in the bound volumes. Each volume is checked against its slip for correct lettering and binding. Under the older procedure, bound volumes were sent to the Acquisition and the Catalog Departments to have bookplates, pockets, and date due slips inserted, to be entered in the Central Serial Record, and to be returned to the departmental libraries. About two additional weeks were consumed by this process. Now we use in lieu of bookplates a monogrammed endpaper, which we furnish to the binderies. Pockets and date due slips are inserted in the Bindery Preparation Division, and the volumes are distributed

directly from this division. The Photoclerk slips are used to stamp the return date on the serial binding cards and are then sent to the Central Serial Record, where the bound volumes are added to the permanent records.

File Equipment

While any file equipment could be used in a procedure like that described above, we adopted the VISIrecord. This is essentially a tub file in which the cards are staggered so that one edge is visible. The cards stand in the file, instead of being hinged or inserted in transparent pockets. Since guide tabs allow the clerk to select any row immediately, and since a whole row is visible at one time, the selection of any one of some 12,500 cards can be made in several seconds. Another advantage of the VISIrecord over the blind file is that the space left when a card is removed is readily visible, facilitating fast refiling. On the other hand we find this equipment to be more compact and easier to enlarge than other visible files with which we have had experience. Enlarging or reducing the file, as cards are permanently added or withdrawn, is simply a matter of sliding all cards in the row; cards are not attached by hinges or plastic pockets. A tub unit, holding 13,000 cards, measures 34" × 24" × 29".

Advantages

1. *Speed.* The most obvious and dramatic advantage of the revised procedure has been the speed of handling material to be bound. While we have made no stopwatch study, we estimate that the time saved for our departmental librarians has been at least half of the time formerly spent. These librarians now merely select the volumes to be bound and send them to the Bindery Preparation Division, without concern over which of the two binderies has bound previous volumes. They need to type no slips for serial volumes and one slip for non-serial volumes. In the Bindery Preparation Division the time required for preparing and sending binding has been cut by at least half. The number of files to consult and maintain has been reduced, typing and recording has been eliminated or decreased, and the use of photographic copying has eliminated the need for most revision. Even the binders have gained something from the new procedure. Where they formerly filed their patterns alphabetically, they are now able to file by pattern number, since our binding record carries their pattern number for each volume to be bound. The job of pulling pattern cards in the bindery has thus been greatly simplified.

2. *Binding time.* The increase of speed in handling material to be bound has resulted in a significant reduction in the total time that books and periodicals are out of the library for binding. Under our former procedure, material awaiting binding was frequently held in the Bindery Preparation Division for two to four months before it could be prepared, and another one to two months after it was bound, awaiting revision, final processing, and recording. Thus the total average time for non-rush binding was from four to six months, during which the material was out

of circulation. This total average time is now six to seven weeks: one to two weeks being prepared, four weeks in the bindery, and one week being revised, processed, and recorded.

3. *Centralization of preparation.* In order to alleviate the bottleneck in the Bindery Preparation Division, the preparation of binder's instructions was formerly done in the departmental libraries, with the Bindery Preparation Division recording titles sent, collating volumes for the library bindery, and revising bound volumes against binding instructions. This division of labor was never very satisfactory, partly because departmental librarians have too many other duties to spend much time on preparing binding, and partly because the resulting preparation, done by many hands, was seldom sufficiently uniform. Further, the assignment to each departmental librarian of a separate binding quota for the library bindery and for the commercial bindery required that the librarian select the required number of volumes from his library each month to be sent to each of these binders. Titles were frequently sent to the bindery which had no pattern of previous volumes. A third problem which had never been satisfactorily solved was the staggered binding of different copies of the same periodical. Since librarians normally wish to have a journal volume bound as soon as it has been completed, it was not unusual for the reader to learn that all copies of a recent volume were at the bindery at the same time. This problem became even more frequent when the total average time that a journal was out of circulation was four to six months. (However, we frequently allowed readers to use a volume which was in preparation, but had not yet been sent to the bindery.)

The simplified procedure, by both eliminating the bottleneck and consolidating the complex of binding records, allowed us to centralize the preparation of material in the Bindery Preparation Division. Selection of the bindery having a pattern of previously bound volumes and staggering of copies also became simple when these responsibilities were centralized in the division.

Conclusion

I am aware that not all libraries divide their binding among two or more binders; not all have a complex of four or five files of binding records; hence, not all will see anything remarkable in reducing binding records to one or two files and reducing total binding and processing time to six weeks. For the Ohio State University Libraries the improvement has been significant. The use of visible files and photoduplication of records to simplify and speed the preparation of binding is certainly not a novel idea. But perhaps some part of our experience may be of interest and help to another struggling library.

Entries For Works Based Upon Periodicals

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“ENTER A COLLECTION of extracts by various authors from a single periodical or newspaper under the name of the periodical or newspaper.” So begins Rule 5C(4) of the ALA Code, citing, as one example,

The Atlantic monthly.

Youth and the new world, essays from the Atlantic monthly, edited by Ralph Boas . . .

This rule is practically justified in so far as it collocates related items and (in a general sort of way) cites source or responsibility. It also is (or seems to be) logically justified. It may, for example, be argued (1) that works are, if possible, entered under authors, (2) that otherwise they are entered under titles, (3) that selections from works entered under authors are entered under authors, and (4) that selections from works entered under titles should therefore be entered under titles. Another rationale, implicit in the wording of ALA Filing Rule 37e and LC Filing Rule Title-VIII, holds that a periodical title used as an entry for a book of extracts is really an author statement, e.g., “The Atlantic monthly” is the author of its *Youth and the New World*. (Neither filing rule, incidentally, follows through with this argument, as both prescribe filing such “author” entries *after* similar title entries: they thus violate the basic principles set forth in ALA Filing Rule 24 and LC Filing Rule Intro-III.)

My observation is that Rule 5C(4) creates a practical difficulty. Patrons confuse entries based upon it with entries for periodicals: they read them as entries for what they *seem* to designate rather than for what they are intended to designate. I feel, too, that there is a flaw in the first argument cited above: what is good for General Motors may not be good for the country; similarly, authors and titles need not be treated analogously simply because of their use in common as entries.

I can see two possible ways to modify Rule 5C(4) which would retain its strengths (cited in my second paragraph) and eliminate its weaknesses (alluded to in my third). Both involve the addition, to names of periodicals, of qualifying phrases. First, one could develop entries based upon Rule 5C(4) into corporate author statements clearly distinguishable from title statements, e.g.,

The Atlantic monthly. Editors.

But such publications cannot always be credited to editors or, indeed, to *any* group. Second, one could develop entries into title statements clearly distinguishable from entries for periodicals, e.g.,

The Atlantic monthly. Selections.

Curiously enough, this second solution (toward which I lean) is anticipated in Rule 27C, which authorizes such entries as

The Classical journal. (*Indexes*)

General index to volumes I-XXV . . .

Why not accord selections the treatment accorded indexes?

If we accept this second solution, the next step is either (1) to compose a number of qualifying phrases designed to bring out various relationships or (2) to compose one phrase which could be applied to all such publications and which would be, if not specific, at least not misleading. I lean toward the second alternative: a variety of phrases would, I am persuaded, complicate cataloging and succeed only in presenting distinctions unlikely to be known to or of interest to catalog users. But "Selections" would be inadequate as a general solution: many such publications are not confined to selections. "Auxiliary publications," "Secondary publications," and "Related publications" smell too much of the lamp; moreover, they are too inclusive, suggesting works about as well as works based upon. I therefore suggest another possibility: the long but inclusive "Selections, adaptations, etc."—the "etc." being all-important. Perhaps "Selections, etc." would suffice.

The proposed change would entail a minimum of practical difficulties: identifying entries to be revised could be safely left to chance, i.e., they could be caught as cards are checked for other reasons or as problems come to the attention of reference librarians; stamps might be used to record qualifying phrases; and tracings might stand as they are, with only headings changed.

In any event, the present uncertain state of cataloging rules—the draft code has not yet ruled on publications based upon periodicals—suggests to me that now might be as good a time as any to reconsider how to enter such publications. The way which I have suggested would, in my opinion, "convenience" the public, gladden the reference staff, satisfy the demands of logic, and simplify (or at least not add to) to the work of filers.

The Development of Subject Catalogs in the U. S. S. R.

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THE SUBJECT CATALOG in Soviet libraries, although second in importance to the classed ("systematic") catalog which alone is regarded as capable of reflecting the relationships among individual fields of knowledge, has now passed half a century of development. This paper traces briefly the history of Russian subject catalogs in the twentieth century, and indicates some of the idiosyncracies of subject cataloging whose principles are subordinated to the philosophical doctrine of dialectical materialism. The subject catalog is defined here as a separate catalog of subjects arranged alphabetically by terms; the dictionary catalog plays no fundamental role in Soviet libraries (with the exception of the Saltykov-Shchedrin Library in Leningrad). The description of the pre-war history of Soviet subject catalogs is partially based on Dikovskaya¹ whose short treatment of the developmental phases of Russian subject catalogs is the only one available.

The first Russian cataloger-theoretician of significance was A. M. Belov, director of the tsarist *Duma* (State Assembly) library, whose rules² are the first cataloging instructions in the Russian language. Only a few tsarist libraries maintained subject catalogs; Belov describes them in his work, together with the subject catalog of the *Duma* library. Another publication of the tsarist period is the little brochure by N. Borovko³ which appeared three years before Belov's work. The catalog of the Simferopol' library, described by Borovko, was not a pure subject catalog but a combination of the classed and subject catalogs.

Immediately after World War I, the delayed impact of the fundamental work of Cutter, Nizet, von Wyss, Bohatta, Zedler, and others brought about a mounting criticism of the classed catalog which, together with the author approach, had been the predominant form in tsarist Russia. The next decade witnessed bitter polemics between classed catalog and subject advocates (Dikovskaya estimates that of the approximately 80 journal articles and 10 monographs on the subject catalog published prior to the end of World War II, two-thirds appeared in the 1920's). The proponents of the subject catalog sought to show that the classed catalog was not suitable for either general bibliographic work or specialized reference problem, and that the subject catalog was a rational replacement; in effect they argued that the classed catalog was superfluous. Defenders of

the classed approach objected to the formalism and lack of scientific character of the subject catalog, contending that with a satisfactory classed and author approach the subject catalog was redundant.

At the First Conference of Science Libraries of the Russian Soviet Federated Socialist Republic in 1924, the moot point was posed as a question of choice between the classed and the subject catalog. Only a few speakers did actually suggest that the alternatives were not necessarily antithetical: A. D. Kalishevskii, for example, argued that the choice of a catalog type would vary according to the type of the library and the nature of its collection. His proposal called for organization of subject catalogs in libraries which either had no catalogs at all or which possessed only poor classed catalogs; at the same time, Kalishevskii maintained that even libraries with well-developed classed catalogs should provide subject approaches to certain sections of their resources.⁴

Major research and special libraries began organizing subject catalogs in 1920, following the example of the Kharkov Central City Library. By 1925, such large research libraries as the Governmental Library in Moscow, the Library of the Communist Academy, and the State Public Library in Leningrad maintained subject catalogs. The cataloging experiences thus gained were soon reflected in the topics of the continuing polemics. The second Conference of Science Libraries of the RSFSR in 1926, for example, devoted considerable time to discussions of practical and technical questions of subject cataloging—principles, subject headings, etc.; it appears to have been assumed that the subject catalog was at least as important as the systematic catalog. The Second Conference recommended that subject catalogs, whose “simplicity is helpful to both library users and librarians,” be established in all science libraries, in addition to classed catalogs.⁵

Organization of subject catalogs received an even stronger impetus at the Conference on Rationalization of Library Work in Moscow in December, 1927, which dealt with the question of appropriateness of subject catalogs for “mass” libraries. Compulsory establishment of subject catalogs in public libraries had already been advocated in 1923 by Slukhovskii⁶ and others who visualized them as “recommending catalogs” (reading guides). The Moscow conference generally subscribed to the idea, and some participants went even further. A. A. Pokrokovskii, for one, stated that the classed catalog was only a temporary cataloging phenomenon, and he urged all new public libraries to organize subject catalogs as their main guide to resources.⁷ Cataloging and filing would be facilitated by entering subject headings on the catalog cards distributed by the Central Cataloging Bureau. One year later, Pokrokovskii and Shamsheva flatly declared the subject catalog to be the best of all existing library catalogs.⁸

Examining the then obviously declining popularity of the classed catalog, Dikovskaya cites two factors: the failure of decimal classification to cope with the dialectical-materialist demands on a classification system, and the frequently-uncritical adoption of Western, especially American, bibliographic practices which in Soviet conditions led to confusion and political incongruity.

Less than a decade after the Moscow Conference, however, the prestige of subject catalogs began to wither away. In their few years of existence, subject catalogs became unwieldy and complicated enough to require practice-tested principles and, especially, reliable and detailed subject-heading guides. Unfortunately, none of the subject-heading lists published in the Soviet Union in this critical period was general and permanent enough to satisfy the pressing need of Soviet catalogers.

The glossary of subject headings, published in 1927 by the Library of the Communist Academy⁹ with a credit to the Library of Congress list of subject headings, was not only limited to political and economic topics but, in view of the rapidly changing interpretation of events and ideas by the Soviet system, it soon became obsolete. The three-volume subject headings for technical libraries,¹⁰ which made a liberal use of the subject divisions in the *Engineering Index*, was based on the cataloging practices of the libraries of the Moscow Mechano-Machine Engineering Institute, the All-Union Auto-Tractor Combine, the Petroleum Institute in Azerbaidzhan, and others. The uneven treatment of individual subject areas, and particularly the total rejection of the principle of inverted entry, soon compelled technical catalogers to introduce modifications.

Nor did any of the other publications dealing with subject catalogs and published in this period¹¹⁻¹³ offer reliable methodical assistance in cataloging principles and heading assignment, with the possible exception of works concerned with such homogeneous fields as medicine¹⁴ or World War II.¹⁵ Some subject areas (art, literature) had no subject-heading guides at all until the publication during World War II of several monographs¹⁶⁻¹⁹ which slightly alleviated the situation.

In addition to the absence of reliable and uniform principles and of comprehensive subject-heading lists, Soviet subject cataloging also faced confusion as a result of the changing interpretations of the demand that library classifications reflect "the correct scientific-ideological exposition of knowledge based on dialectical materialism." Library catalogs have, in the Marxist-Leninist view, an important politically-educational mission, as a result of which the ideological formulation, contents, and political trend of subject headings must be closely observed. This guiding fact of Soviet subject-cataloging principles was described more recently in the fundamental paper of Kruglikova.²⁰

The maxim of "political acuteness" in subject cataloging may, for example, call for subdivision of entries according to their political or ideological connotations. S. K. Vilenskaya,²¹ writing on the current problems of the originally LC-based subject catalog of the Fundamental Library for Social Sciences in Moscow, mentions that works on the market economy will be found under the headings "Imperialism," "Economy of capitalist countries," "Monopolies," "Government-monopolistic capitalism," and under "Parasitism and decay of capitalism." The entry "Africa-History-1945-" has been relinquished in favor of "Imperialism, American in Africa;" etc.

Similarly, the heading "Fascism" will be subdivided along ideological lines to separate fascist literature from criticisms of this movement; the latter subdivision must in turn identify bourgeois criticism of fascism and separate it in the catalog from social-democratic criticism, and social-democratic criticism must make a clear distinction between rightist social-democratic writings and leftist social-democratic literature on fascism. All these forms of criticism must, of course, be separate from Marxist-Leninist literature on fascism.

Similar principles become particularly relevant in the areas of political economy, where terms such as "industry," "labor" and "agriculture" acquire specific socialist meanings. No writings on Soviet agriculture published in the U.S.S.R. can be entered under headings implying a problem, since the agricultural question in the Soviet Union is regarded as solved; such writings would then be listed under "Agricultural policy—U.S.S.R.," "Socialist reconstruction of farming," "Collectivization of farming," etc.

The educational character of catalogs sometimes calls for defiance of the alphabetical order. In geographical divisions, Dikovskaya would have writings about the Soviet Union before all literature on other countries. An entry would thus have the following geographical subdivisions:

Industry—U.S.S.R.
Industry—Moscow province
Industry—Ural
Industry in capitalist countries
Industry—England
Industry—France
etc.—

The requirements for correct interpretation of knowledge, and the lack of reliable, published subject-heading guides and of qualified catalogs have combined in the 1930's to reverse the growth of subject catalogs in Soviet libraries; many libraries, particularly the small public institutions, found it impossible to cope with the problems and abandoned the recently-organized subject catalogs in favor of the classed approach. This trend was not quite reversed even after World War II: subject catalogs in the U.S.S.R. have not regained the degree of importance they had enjoyed in the period following the October Revolution. At present, only a few large public libraries maintain subject catalogs as their main guide to resources, and of the 38 special libraries of the Academy of Sciences in the Leningrad area only two have subject catalogs.²² In accordance with the 1946 directives for administration of mass libraries, subject catalogs are viewed as supplementary to the classed catalog. Numerous special libraries with collections in one area do, however, maintain only subject catalogs,²³ and as recently as 1960 Karpova defended the subject catalog as offering, in combination with the classed catalog, and rational approach to technical literature essential in large technical and university libraries with heterogeneous clientele.²⁴

Karpova also compiled the first methodological guide for subject cata-

logging of technical literature;²³ published in 1957 and offered to both general and technical libraries as a vade-mecum to the organization and maintenance of subject catalogs, it is based on the fundamental philosophical and methodological appraisal of subject catalogs by Kruglikova²⁰ and Konovalova.²⁵ With the exception of the subject-heading list for medical libraries²⁶ which has some 12,000 entries, individual lists of headings employed by some of the larger research libraries are unpublished. A variety of Russian and foreign classification systems for subject catalogs is in use in the Soviet Union, and even the Lenin State Library uses no uniform classification system for its subject catalogs.

The pre-occupation during the last six years with a "socialist classification of knowledge" implies a continued prevalence of the classed catalog. The adoption of the new "main order of classification of knowledge on basis of dialectical materialism"²⁷ will probably result in a more precise and definitive formulation of the principles of subject cataloging and eventually produce authoritative subject-heading lists, at least for the public and social science libraries. The effect of the new "main order of classification" was already felt at the Conference on Subject Cataloging Problems, in December 1959, in East Berlin: the conference called for a radical abandonment of subject catalogs compiled on "idealistic" basis, and for compilation of a new subject-heading list based on the principles of dialectical materialism; for the latter list, both the decimal classification and the *Einheitliche Systematik* scheme, used currently in the German Democratic Republic, were rejected.²⁸

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Simplified Cataloging of Federal and State Documents

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Introduction

THE OREGON STATE LIBRARY has always taken pride in the fact that its Document Collection, which is separated from trade publications, was fully cataloged. The day has long since passed when there was time or money to be used for such an expensive service. A constantly increasing backlog of materials made it necessary to take drastic steps to reduce the accumulation of years and to cope with the current influx of public documents. Too often publications of value at time of printing outgrew their usefulness stagnating in storage.

In order to eliminate the backlog, to reduce the amount of professional time spent on cataloging, and to make available as soon as possible incoming publications, an expediting plan was devised by Doreen Yorkston Portal, former Documents Librarian. The plan was to be applied to unbound separates only, excluding all Oregon public documents or others related to Oregon.

Summary of Plan

Under the plan, instead of classifying each separate as an individual item, the agency issuing the document is classified. The classification number is kept as simple and general as possible. Classes used for annual or biennial reports of the agency may serve as a guide in assigning the numbers.

The arbitrary title "General publications" is assigned and individual titles issued by a given agency are listed as contents on the main catalog card bearing this title and are arranged chronologically by year of publication. This allows adding earlier publications which may be received later than the beginning date. The year is included in the call number; a separate set of cards being made for each year's publications.

Each item added is assigned a number as received. Titles are abbreviated if they are very long, or the full title may need to be given to differentiate from one added previously.

For each "General publications" card placed in the main card catalog, one shelflist card is made. This is necessary to avoid future conflicts in both classification and in Cutting. Information on the shelflist is kept to a minimum: the call number, without any year date, issuing agency as author, and title "General publications" followed by the date, written in pencil, of the earliest year for which there are such titles added. No holdings are shown since the numbers appearing under this title are arbitrarily assigned as accession numbers and have no reference use as far as listings in published bibliographies are concerned.

Routines for Implementing Plan

All incoming documents are held for one week to permit a reference librarian to review new publications. After this examination, the Documents Librarian sorts the week's accumulation into various categories, i.e. serials which are added by a catalog typist, those for the Documents Assistant to add to cards already established under the "General publications" plan, those which require full cataloging, and new titles for which "General publications" cards must be prepared.

When this sorting is completed, the Documents Assistant, who processes those "General publications" for which an entry has already been established, removes the appropriate cards from the catalog, records titles and marks the publications as they are recorded. Care must be exercised to be sure that the titles are being recorded on cards for the year in which the documents are published. If more than one card is needed, extension cards are added as for any regularly cataloged item. The accession number assigned is determined by what has been added earlier (e.g., if four titles have already been added to the 1958 card, the next title added for that year would be number five). These numbers are placed in square brackets to indicate that they have been arbitrarily assigned. By beginning with number one for each year, additions to cards for earlier years may be made without interfering with the accession numbers for later years.

If no "General publications" entry has been established for a given agency, the Documents Librarian prepares one. In selecting the author the most specific name is used that is allowable under the 1949 ALA rules. No subdivisions are used beyond the established entry, e.g. *U. S. Housing and home Finance Agency*, not *U. S. Housing and Home Finance Agency, Office of Administrator*. In case there is a question of the correct entry for a publication, it is checked with the *Monthly Catalog of United States Government Publications*, the *Monthly Checklist of State Publications*, or *The National Union Catalog; a Cumulative Author List* to determine the issuing agency.

If the content of a given publication makes it valuable for a special collection in the library, for example the Legislative Reference Collection, the cards and publication are marked to indicate that it is shelved out of its usual location. The agreement with the Readers Services Division has been that any publication which is used sufficiently to justify a specific classification will be removed from the "General publications" cards and will be reclassified if necessary and cataloged fully under its own title. Few requests of this kind have been made; usually a subject analytic has proved sufficient.

Summary of Effectiveness

From the technical point of view, the plan has made it possible to reduce appreciably the backlog, and current acquisitions reach the shelves within two weeks of receipt. Except for the deliberate holding of the materials for a week, many of the publications would be processed sooner. It also provides an easy disposition of relatively unimportant materials received on deposit from the Superintendent of Documents which we are obligated to retain.

No cost study has been made, in fact it might be impossible to make one to determine savings. It is reasonably certain that another full-time cataloger would have to be added to the staff in order to catalog fully every item acquired.

It would be a falsification to say that the plan is accepted wholeheartedly by users of the public card catalog; the reaction is one of acquiescence rather than real approval. It necessitates greater use and dependence on published indexes. Under increasing work pressure, it does take more time on the part of the reference staff. However, it is a debatable question whether search on the part of the reference librarian is more expensive to the institution than the time-consuming efforts of a cataloger of government documents.

The Divided Catalog, A Study of the Catalog of Central Baptist Seminary

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THE DIVIDED CATALOG has been widely discussed by librarians ever since it was first suggested as a possible form for the index of a library's collection. Strong opinions have been voiced both in favor of division and in objection to it. Some writers have set forth the pros and cons of the argument, expressing no opinion of their own. They leave the decision as to the value of the divided catalog to the individual librarian.

My interest in the divided catalog began almost two years ago, just before the decision was made to divide the catalog of Central Baptist Seminary, Kansas City, Kansas, where I am employed as Catalog Librarian. The main substance of this article is based on personal experience with the divided catalog in this Library.

The indexing of library holdings, at the present time predominantly found in the form of a card catalog, has gone through many changes during its history. In the fourteenth century, subject catalogs were in high favor. These gave way to author catalogs in the eighteenth century, which in turn were followed by the language and size classification methods advocated by Gesner, Durie, and Rostgaard.

After this, catalogs returned to author and subject form. In 1825, the scientific classified catalog was evolved for use in the British Museum. In modern times the German research libraries have developed two main catalogs in each library—an alphabetical file of authors and anonymous titles, and a subject catalog. The subject catalogs are arranged in either alphabetical or classed order. This form of catalog is rather widely used today in the large libraries of European countries.

The modern debate of the divided catalog versus the dictionary catalog marks its beginning from the year 1937. Librarians began to be dissatisfied with the form of the catalog and sought to make it more economical, and easier to use. They began to re-examine their superstitions as pointed out by Fletcher in 1905:

It (dictionary catalog) has the character of a superstition in so far as it is accepted and religiously carried out on grounds that are traditional, rather than on any intelligent conviction that it meets present needs and is good for the future needs for which we must make provision.¹

¹ Fletcher, W. I. "The Future of the Catalog." *Library Journal*. 30:141. March, 1905.
Volume 6, Number 3, Summer, 1962

The ultimate in perfection has not been reached, but library catalogs are being studied and questioned in order to make them as useful as possible in their particular situations. The findings and results have been shared and discussed. Several by-products have arisen, and each could be a study in itself. Our purpose is not to explore all of these possibilities, but to examine the divided catalog as it operates in a particular situation.

Method for Changing to a Divided Catalog

Central Baptist Seminary Library divided its dictionary card catalog into two separate files (author-title, and subject) in September, 1959. This division was made for a number of reasons. It was felt that the economy achieved in filing costs would be sufficient to offset any added expense of duplicate cards. Another reason for the division was the belief that a divided catalog would be easier for the students and faculty to use. Since the library had recently initiated a full-scale recataloging program, changing from the Union Classification system to Dewey Decimal Classification, it seemed wise to divide the files before there was any great accumulation of cards.

The actual shift was mostly carried out by clerical staff members under the supervision of the Librarian. The file clerk went through each tray removing the subject cards and filing them into new trays. As the subject cards were removed from the author-title cards, the Librarian went through the main entry cards and checked the tracings. In those instances where title cards had been omitted because of similarity to subject headings the card was pulled and sent to a typist to have a title card made. Inverted titles were made for titles beginning with such phrases as: "Introduction to . . ." "Handbook of . . .", etc. To help make these inversions clear, reference cards were devised, worded as follows:

Introduction to . . .

For titles of works beginning with this phrase,
see under the main part of the title. For
example, for the title: An introduction to
Archaeology; see under the inverted form:
Archaeology, An introduction to.

Reference cards like this are filed alphabetically in the author-title catalog. In some cases it is not feasible to invert the title, but this occurs so rarely that the presence of some uninverted titles is not confusing.

To help avoid confusion about prominent persons who were writers and also the subject of the writing of others, we devised "By and about" reference cards. By and about references were not made for the items already cataloged, assuming that as the recataloging progressed, most of the names would occur again, and references could be made at that time. Sample reference cards are shown below:

Emerson, Ralph Waldo, 1803-1882.

For works *by* Emerson, see under his
name in the SUBJECT CATALOG.

The card shown above is filed in the author-title catalog following all main entry cards for Emerson. The following card is filed in the subject catalog following all cards for works written about Emerson.)

EMERSON, RALPH WALDO, 1803-1882.

For works *by* Emerson, see under his name in the AUTHOR CATALOG.

The mechanics of the shift to a divided catalog were completed within a week. Explanatory signs were placed on each part of the catalog, and special instruction was given during the orientation sessions at the opening of the school year.

Added Cards Needed for a Divided Catalog

In order to determine the added cards and extra cost required for a divided catalog, statistical records were kept for all cataloging done from September, 1959, through February, 1960.

By the end of February, 12,162 volumes had been recataloged. The number of catalog cards in the divided catalog was estimated as 83,218. This figure was determined by multiplying the number of volumes by 6.9, the average number of cards required per volume. This average number of cards per volume was found by keeping special records for a two-week period. The cards produced were counted, and this total was divided by the number of volumes cataloged.

When the catalog was first divided, the initial number of duplicate cards made was 1011. By the end of February, the records kept by the catalogers showed a grand total of 1488 duplicate cards made during the normal process of cataloging.

In order to arrive at the percentage increase in card typing for the divided catalog, the total number of extra cards (1488) was divided by the total number of cards (83,218). The result shows a 1.78% increase in card typing. Another way to show added cost is to compute the proportion of the total number of books that require an extra card. Assuming that the extra cards each represented one volume, there were 1488 volumes which required extra cards. By dividing the total number of volumes cataloged (12,162) by the number of volumes which required extra cards (1488), the result is 8.1. This means that one out of every 8.1 volumes cataloged required an extra card. By reducing this to percentages, we find that 12.2% of the books require one extra card for the divided catalog. It would be difficult to compute the cost per card, but it seems that the cost in added cards for a divided catalog is not prohibitive in this situation.

Greater Ease and Economy of Filing

No definite study has been made, and no records have been kept for the cost or ease of the filing operation. Since the division of the catalog, a greater degree of facility in filing has been evident. It is possible to use clerical personnel for the filing, and the percentage of filing errors resulting from lack of understanding of rules has become much smaller.

For Central Baptist Seminary Library this represents a savings in money by enabling us to use clerical personnel for filing. It is also a savings for the professional staff in that it allows time for other professional duties. The file clerk works under the direct supervision of the cataloger, but the filing has been very accurate and requires little time for revising.

Reactions of Users of This Divided Catalog

In order to determine what the faculty and students thought about the divided catalog as compared to the dictionary catalog, a random survey was made of regular users of the catalog. The survey was conducted by means of personal interviews, and they were held in March, after the divided catalog had been in use for six months. The survey questions and tabulated results are given below.

1. Do you like the divided catalog better than the dictionary catalog we had before, or dictionary catalogs you may have used in the past?

YES—Like divided—19

NO—Like dictionary—0

No preference—2

2. In what ways does the divided catalog help you in your research? (Some interviewees gave more than one answer.)

Less cards to go through—5

Easier to use—7

Easier to find subjects—7

Faster general finding—6

Like all authors together—3

Easier to understand filing—1

3. In what ways does the divided catalog hinder you in your research?

None—16

Takes longer—3

Confusing—1

4. When using our divided catalog do you have any trouble deciding which catalog to look in when seeking material about a person, such as, for example, about Karl Barth?

YES—Would use A-T catalog—8

NO—Would use subject catalog—13

5. When using our divided catalog do you have any trouble deciding which catalog to look in when seeking material produced by an association or governmental agency such as, for example, the National Education Association?

YES—No idea where to go—3

YES—Use subject catalog—8

NO—Use A-T catalog—10

Trouble at one time—1

6. When using our divided catalog do you have any trouble deciding where to look when seeking material on a subject without knowing any particular author, such as, for example, Juvenile delinquency.

NO—Use subject catalog—21

YES—Use A-T catalog—0

7. Is the divided catalog a time saver for you?

YES—18

NO—3

8. Is the divided catalog less confusing to you, or more confusing than the dictionary catalog? Which?

Less confusing—17

More confusing—1

Confusing at first—1

Equally confusing—1

Neither is confusing—1

9. Which catalog do you use the more often—the author-title catalog, or the subject catalog?

Author-title catalog—15

Subject catalog—4

Equal use of both—2

In looking over the questions and the answers received, a few general conclusions may be drawn concerning the feeling about the divided catalog in this school and about the approach of the users to the catalog. The users like the divided catalog better than the dictionary catalog. It has proven itself to them, and this is reflected in their answers to the second question. But the fact cannot be ignored that a rather large proportion of the interviewees are confused in their approach to the catalog.

The answers to the fourth and fifth questions show that the users have difficulty in distinguishing the different kinds of entries in card catalogs. Because Karl Barth is a well-known author as well as the subject of many works, the users expect to find all cards together. It was also observed that some of the students (and faculty!) had no idea that corporate bodies are sometimes used as the main entry for books or other material. After the interviewees had answered all the questions, a brief explanation was given to those who had been confused in the hope that it would aid in the more efficient use of the catalog.

Several persons indicated that the divided catalog helped them because all irrelevant cards have been removed, and they like to see all the subject cards together or all the author-title cards together. This seemed to be the basic reason for agreeing that the divided catalog is less confusing than the dictionary catalog.

The majority of the students use the author-title catalog more than the subject catalog because of the manner in which the faculty make the study assignments. Bibliographies are compiled for reading and for sources for term papers. The students bring the bibliography to the library and check the author-title catalog for location symbols. Very few assignments are given in broad subject areas without specific authors or titles being mentioned. When the student uses the subject catalog it is frequently for extracurricular interests or needs.

In conclusion, we might say that the divided catalog is very satisfactory in this situation, and the division is not regretted. Probably the main area for improvement is instruction for the users concerning the types of entries found in card catalogs.

Notes on Foreign Books

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THERE IS A GREAT upsurge in the number of foreign books in the United States, and in the coming years that number will continue to increase. There are many reasons for the importation of these books: the accelerated scientific program, the exchange of students, the awakening desire on the part of the citizens of the United States to learn a foreign language, and the increasing number of tourists visiting every part of the world.

In view of the fact that the practices of format and binding of books printed in foreign countries differ from our own, there is need for a standardization of information on catalog cards.

The writer of this article has been working with over 8,000 foreign books, in 25 languages, for over 3 years in the library of the Language Training Facility at Fort Hood, Texas. This Facility received the books through military channels from 25 foreign countries; they were 50% fiction, 30% general non-fiction, and 20% encyclopedias, dictionaries, and the school texts used in the classes of those countries. These books formed the working basis for the linguists of a military intelligence company stationed at the Fort.

The Editor of Dewey's *Classification and Relative Index*, in the 16th edition (page 17) and Melvil Dewey himself (page 61), suggest that for books written in a foreign language the language initial be prefixed to the class number, such as F, French; G, German; I, Italian; Sp, Spanish; Sw, Swedish, etc.

The U. S. Army, however, has developed a system which we find superior to the prefixed initial; it has designated code numbers to be used for languages. Following is the suggested list:

01 Albanian	14 German	29 Persian
02 Arabic	15 Greek	30 Polish
03 Armenian	16 Hebrew	31 Portuguese
04 Bulgarian	17 Hindustani, Hindu	32 Rumanian
05 Burmese	18 Hindustani, Urdu	33 Russian
06 Cambodian	19 Hungarian	34 Serbo-Croatian
07 c Chinese, Cantonese	20 Icelandic	35 Slovene
07 m Chinese, Mandarin	21 Indonesian	36 Spanish
08 Czech	22 Italian	37 Swedish
09 Danish	23 Japanese	38 Thai

10 Dutch, Flemish	24 Korean	39 Turkish
11 Estonian	25 Laotian	40 Ukrainian
12 Finnish	26 Lithuanian	41 Vietnamese
13 French	27 Malay	42 Yiddish
	28 Norwegian	

These numbers become part of the call number, being placed above the class number. In the case of reference books, it is below the designation R. As examples of books using the code number, Tolstoi's *War and*

Peace in the original is ³³891.73; Rostand's *Cyrano de Bergerac* is ¹³842 ; Kyu, ^{T654}R839

The Philosophers of the Orient is ²³181.11.
K99

Dewey (*op. cit.*, p. 61) also recommends that the foreign books be shelved in a "parallel library." In the case of the average American library, this would mean that they are shelved away from the books in English, on separate shelves. This would be true also for the shelf list cards and the catalog cards. One section of the card catalog, with as many drawers as needed, is set aside for foreign books and suitably marked. In the Language Training Facility the books of each language are in a section by themselves, and a drawer in the card catalog is used for the cards of each language. The Library has no English books for the foreign books to parallel, but the sections parallel each other.

The advantages of using a code number for each language are:

1. Shelving is easier. As in the normal use of the call number in shelving, the books are shelved according to the code number first, then the decimal number, then the Cutter number and/or author's initial.

2. Possible errors are eliminated. J could be both juvenile and Japanese books. F could be both fiction and books in French. R could be both reference and books in Russian—or Rumanian.

3. The possibility of mix-ups in languages is eliminated. Many classics have been translated into various tongues. For example, Tolstoi's *War and*

Peace, as noted above, has the call number ³³891.73. When translated into ^{T654}

French, the number becomes ¹³891.73. In Korean, it is ²⁴891.73.
^{T654} ^{T654}

The average library will not have too many languages with which to work. The most popular ones do not number more than 10; and after a few weeks, the numbers will become fixed in the cataloger's mind so definitely as to become automatic. Not many languages will be worked with at the outset; as the number grows, the librarian will find that code numbers already used are firmly known.

In the Language Training Facility, Cutter numbers were used for the following reasons:

1. The task of inventorying is more quickly done, by the comparison of the shelf list card with the call number of the book. Otherwise the author and title would have to be transliterated, in some cases, and the title translated in all cases, and written on the title-page of the book.

2. Patrons are able to find the book they are looking for quickly and easily, if each book is distinguished by its call number.

The only change from the conventional card form is occasioned by the foreign title which must be translated and, at times transliterated. Following is an example of a main entry card:

19
894.5¹¹³
J74 Jókai, Mór, 1825-1904.
 A köszívü ember fiaí (tr: The sons of
 the stone-hearted man). Budapest, Szé-
 pirodalmi Könyvkiadó, 1958.
 552p. front. (port.)

(Library of Congress cards can be used for many foreign books, but it will be found that many books will be peculiar to any one library, necessitating the making of the cards.)

As far as subject cards are concerned, fiction, essays and letters, drama, wit and humor, and poetry involve a change from Sears. This book would provide the subject heading ITALIAN LANGUAGE—FICTION for the book *The Little World of Don Camillo* by Guareschi. However, the person looking through the catalog cards for Italian books, all of which have been filed together in a separate area, and knowing that all the cards represent books in the Italian language, does not look for ITALIAN but for FICTION. So that book would be found under FICTION—ITALIAN; Dante's *Inferno* under POETRY—ITALIAN, etc.

The following points are important in the preparation of foreign books: Electric pencil and white or orange transfer paper are excellent in the labeling process for the books with dark covers. However, black India ink, good for light books, cannot always be used to advantage, because the quality of paper in many foreign books is so poor; often the ink spreads and runs, making the label illegible. We have found the solution to this to be a ballpoint laundry-marking pen; it is permanent and marks equally well on all kinds of paper and on cloth-bound books. It does not spread on poor paper. The one exception to the use of the laundry-marking pen is on certain types of glazed paper; an eraser is necessary to remove the glaze before lettering.

Foreign books present the same problems of care as books printed in the United States, but they are more frequent. Some of the paperbound books have jackets; most do not. In the Language Training Facility, the jackets of all of the books are covered with plastic covers, even though it is difficult to attach the jackets on a paper cover sometimes not even as heavy as the jackets themselves. However, it was found to be good protection. The paperbacked books without jackets are the problem. After

a few lendings, the covers are torn, in some cases quite badly. As irreplaceable books, they have to be protected. If they are thin enough, pamphlet binders are used. If they are too thick for even the out-sized stapler, much protection is secured by the use of a heavy adhesive-backed clear plastic.

It has been found many times—especially in the case of Chinese and Turkish books—that the contents of the book continue even as far as the inside of the back cover. This presents the problem of where to put the pocket for the book card. The best solution is to add an extra page to the book, and attach it firmly; the pocket is then put on this blank page, leaving the contents readable.

Regional Groups

BARBARA WESTBY, *Chairman*
Council of Regional Groups

FEW REGIONAL GROUPS meet during the winter months. Hence we have only six programs on which to report, but these are varied and interesting.

The October meeting of the Resources and Technical Services Section of the Georgia Library Association consisted of five round table discussions with the following leaders: (1) Copying methods for small and medium-sized libraries, John Bannister, W. C. Bradley Memorial Library, Columbus; (2) Inexpensive binding for lesser-used periodicals, Evan Farber, Emory University Library; (3) Self-study evaluation of a catalog department, Mrs. Ethel Rose, University of Georgia Libraries; (4) Acquisition of out-of-print materials, Mrs. Howard Pursell, Chestatee Regional Library, Gainesville; (5) Catalog code revision: relationship with reference service, Barbara Bronson, State Department of Education.

In December the Philadelphia Area Technical Services Librarians heard Samuel Lazerow, Chief, Technical Services Division, National Library of Medicine, speak on Technical Services in the Soviet Union.

The Southern California Technical Processes Group at its February meeting toured the Kater-Crafts Bookbinders in Los Angeles and Marvin Kavin of the firm answered questions. This Group has two interesting ideas for the future: a panel to inform the members how they can aid in obtaining improved monetary and legislative support for their libraries and a discussion on the implications of commercial cataloging.

Elizabeth Rodell, Executive Secretary, RTSD, was the main speaker at the meeting of the Texas Regional Groups of Catalogers and Classifiers in March. She spoke on the *Guide to Use of Dewey Decimal Classification* and Merrill's *Code for Classifiers* was discussed and comparisons made between the two books. The second part of the program was a panel on

the Eternal Triangle: Administrator, Cataloger, and Reference Librarian. Mrs. Barbara Emigh, Department of Library Science, Our Lady of the Lake College, served as moderator, and panel members were Mrs. Phyllis S. Burson, La Retama Public Library, Corpus Christi; Mrs. Adele Speiser, Alamo Heights High School; and Frank M. Temple, Texas Technological College, Lubbock. They stressed the need for cooperation and coordination in what they felt was a desirable and necessary triangle.

Catalog code revision, its history and proposed changes, was the topic of the talk by Paul Dunkin, Graduate School of Library Service, Rutgers University, at the joint meeting of the New Jersey Library Association Catalogers Section and Reference Section. This speech was followed by four round table discussions: (1) How the public views the card catalog, Mrs. Helene S. Taylor, Bloomfield, leader; (2) What the new catalog code will mean to reference service, Paul Dunkin; (3) The catalog as a reference tool, Ben Grimm, Free Public Library, Montclair; and (4) Channels of communication between the reference librarian and the cataloger, Robert F. Sutton, Monmouth College Library. Miss Isabel Gulick, Chairman, Catalog Section, opened the meeting with a brief talk on the catalog as the key to the library, and Mrs. Dorothy Johnson, Chairman, Reference Section, summarized the proceedings with the ways reference librarians and catalogers could cooperate and the advantages of such cooperation.

Ruth Eisenhart, Head, Catalog Department, Union Theological Seminary, and an official delegate to the International Conference on Cataloguing Principles, reported on the Conference to the Connecticut Library Association Resources and Technical Services Section at its March meeting. Her interesting paper reviewed the world climate for revision, the procedure of the conference, and summarized some of the papers and ideas discussed at the meeting.

CLASSIFIED CATALOGS

The Classification Committee of the ALA-RTSD-Cataloging and Classification Section has been making an informal survey of classified catalogs currently in use in the U. S. and Canada. Following is the list. Anyone with knowledge of others is urged to send the information to Mrs. Phyllis A. Richmond (Chairman) at The University of Rochester Library, Rochester 20, New York.

CLASSIFIED CATALOGS CURRENTLY IN USE

<i>Library</i>	<i>Classification Used</i>	<i>Comments by Librarian</i>
Library of Congress, Music Division	Library of Congress	
John Crerar Library, Chicago	Dewey	
Boston University Library	Library of Congress	
Engineering Societies Library, N. Y.	Universal Decimal Classification	Most enthusiastic.

CLASSIFIED CATALOGS CURRENTLY IN USE (Con't.)

<i>Library</i>	<i>Classification Used</i>	<i>Comments by Librarian</i>
Carnegie Library of Pittsburgh, Technology Dept.	Universal Decimal Classification	
Municipal Reference Library, Chicago	Glidden-Marcus	Enthusiastic.
U. S. Dept. of Agriculture, Forest Service, Berkeley, Calif.	Oxford System of Decimal Classification for Forestry (expanded U. D. C.)	Enthusiastic. Shera & Egan good manual for classified catalog construction. Need more literature on indexing.
Southern California School of Theology, Claremont	Bliss	Shera & Egan satisfactory for catalog manual.
Washington State University Library, Pullman Science Library	Dewey (with expansions)	Enthusiastic.
American Museum of Natural History, N. Y.	Concilium bibliographicum of H. H. Field	Dislikes classified catalog. Wishes to replace with conventional one. Difficult for patrons to use.
Creighton University. Law School Library	Classification scheme of Los Angeles County Law Library (adaptation of Benyon Classification system)	
General Mills Central Research Laboratories Library, Minneapolis	Special classification	Classified catalog for documents—not satisfactory. May be eliminated.
Engineering Institute of Canada, Montreal	Universal Decimal Classification	Would like a code.
Dominion Bureau of Statistics, Ottawa	Dewey (with adaptation)	More efficient for subject searching than standard catalog.
National Library of Canada, Ottawa		
Canada, Dept. of Forestry, Ottawa	Oxford System of Decimal Classification for Forestry	
CLASSIFIED CATALOG ABANDONED		
University of California, Berkeley	Rowell Classification	Classified catalog eliminated in 1943. Has public shelf list.
SPECIAL SEMI-CLASSIFIED CATALOG		
California. Dept. of Finance, Sacramento	Home made	Shelf list with expanded subject index sending patron to shelf list.

REVIEWS

Shaffer, Kenneth R., *The Book Collection: Policy Case Studies in Public and Academic Libraries*. Hamden, Connecticut, The Shoe String Press, Inc., 1961. 147p.

Policy Case Studies in Public and Academic Libraries is the third in the series of *Case Studies in Library Administration*, the first being *Twenty-Five Cases in Library Personnel Administration*, which this reviewer has used successfully for the past three years in a general course on administration. Mr. Shaffer, Director, School of Library Science, Simmons College, is to be congratulated on continuing the series, which he indicates is designed for the graduate library science student, for in-service training, and for institutes and workshops concerned with policy formulation and administration decisions.

The present volume on the book collections does not seem to this reviewer to be as useful to the classroom as the first two. Perhaps too much ground is covered as Mr. Shaffer in his foreword indicates.

The twenty-five cases included in this collection deal with book selection, book acquisitions, and service problems which occur at the administrative level in public and academic libraries.

Of the nine cases which apply to the public library, three have to do with the handling of complaints about books included or types of service given. The six remaining cases deal with book selection or book acquisition policies and seem somewhat peripheral to the problems of the modern library. They include such matters as the officious book dealer who tries to secure library orders by imposing his judgment by personal annotations of his catalogue; a bequest

of \$100,000 to a public library for a genealogy collection because the donor had taken a dislike to the state library where the gift should logically have gone; a small memorial collection with impossible strings attached. Two of these cases deal with book selection by trustees, which may still be a problem in some small libraries.

The remaining case entitled "A Rental Collection" seems to be wide of its mark. It involves a conscientious librarian, a good book man, who receives a proposition from a book dealer to place in the library a large rental collection made up of detective stories, westerns, light romances, and best sellers, the four classes which tend to drain off a library's limited book fund; the collection to be made entirely by the dealer. Since the librarian has already admitted that he has to buy this "trash", it would seem that this case is not focused on whether or not the library should be dealing with escape reading, but only on how it is to be supplied in some quantity. It is regrettable that this case could not have clearly posed the question as to what is the responsibility of the modern public library to compete with the mass media in the escape literature field.

In his summary for the Public Library Inquiry, Dr. Robert Leigh has suggested that instead of competing with the mass media, "The public library's natural role as an agency of public communication is to serve the group of adults whose interest, will, and ability lead them to seek personal enrichment and enlightenment." This role of the public library involves not only a wide selection of the best books as they are issued, but liberal duplicates of those titles which may have special significance for the time and

community. It is disappointing that these case studies do not reflect this changing concept.

In his foreword, Mr. Shaffer states, "The effective use of cases in any teaching or learning situation involves quite special technique and methodologies, for, indeed, the case approach may lose much of its effectiveness when it becomes only an undisciplined vehicle for discussion." In this volume an appendix has been added with an added case accompanied by two representative solutions which illustrate the processes of case solution. This will be of value to students unfamiliar with case study methods.

We are indebted to Mr. Shaffer for this series of case studies in library administration and look forward to succeeding volumes.—*John S. Richards, Librarian Emeritus, Seattle Public Library; Visiting Professor, University of Washington.*

George Fry and Associates, Inc. *Study of Circulation Control Systems*. Chicago, Library Technology Project of the American Library Association and the Council on Library Resources, Inc., 1961. 138pp. (LTP Publication, no. 1) \$2.50.

This, the first publication of the Library Technology Project, is a product of a cooperative effort of the Council on Library Resources, Inc., the American Library Association, and the Special Libraries Association. George Fry and Associates, management consultants, were commissioned by these three organizations to undertake a comprehensive study of circulation control systems in public, college and university, and special libraries. Throughout the study the staff of George Fry and Associates was assisted by an Advisory Committee consisting of representatives of the Library Technology Project, the Council on Library Resources, and the Special Libraries Association as well as directors of representative libraries. In addition, Gerald Gold, methods ana-

lyst of the New York Public Library, worked full time with the firm in the planning, investigation, and preparation of the published report.

"To identify the most effective [circulation] systems and develop new adaptations designed to assist librarians" as commissioned, it was determined that study objectives should be: "(1) to analyze the components of existing circulation control systems and of new systems and devices in process of development; (2) to search for and develop improvements in these components; (3) to combine components to achieve the maximum in simplicity, economy, and flexibility consistent with effective control; and (4) to present the findings and recommendations in such form as to make them applicable to library operations by any interested or qualified librarian . . ."

To accomplish these objectives questionnaires were sent to 4,585 public, college, and university libraries. In addition, 73 public, 19 college and university, and 12 special libraries were visited to obtain more detailed information.

As a result of these activities, twenty-eight types of circulation control systems were identified and examined in detail. Greater diversity in circulation systems, as might be anticipated, was found among public libraries where any one of the twenty-eight identified systems might be in use. Most college and university libraries and special libraries where knowledge of book location is needed at all times, book card file or charge card file systems, rather than transaction card systems, predominated.

In order to develop comparative data, six areas of circulation procedure—registration, charging, discharging, overdues, reserves, and statistics—were analyzed as to equipment and maintenance expenses, operating times, and materials cost.

The conclusion reached by George Fry and Associates is that for most public libraries the most efficient system is

the Self Charge Transaction System, basically the Wayne County (Michigan) one developed by Walter H. Kaiser. The Newark Self-Charge-Signature System is considered the least expensive book or charge card file system for college and university libraries. In special libraries, which normally charge out materials by telephone and messenger, the Newark Staff Charge system is believed to be most economical.

These conclusions are supplemented by a number of specific recommendations, such as, for public libraries, that greater use be made of borrower participation. Recommendations for college and university or special libraries include tabbing (for date due) book or charge cards if, for purposes of book location, the entire circulation file must be in one alphabetical call number arrangement.

An implementation program of the reports, conclusions, and recommendations has been incorporated in three circulation system selection manuals, available separately, which are designed to enable a public, college and university, or special librarian to determine the optimum circulation control system for his specific library situation.

Perhaps the most valuable contribution of the *Study of Circulation Control Systems* is the time and cost data developed for circulation systems. Undoubtedly one of the system selection manuals in many instances will, as intended, help a librarian improve his present system, discover cost reduction potentials, or determine if a change in systems would be desirable.

In spite of these assets, there are disappointments in the *Study of Circulation Control Systems*. The numerical predominance of small and medium size libraries seems to have influenced conclusions and recommendations. Perhaps this is fair enough. One cannot help but think, however, that the "control" problem of circulation work in large libraries requires more than proposals based on medium and small li-

brary circulation volume. The preliminary study of Library Circulation Systems for the Council on Library Resources prepared by John Diebold Associates, Inc. in 1959, noted that it does not appear to be an improvement if economies in circulation procedures reduce the amount of information available to the librarian. This is a point which the authors of *Study of Circulation Control Systems* seem to have overlooked. Certainly in large libraries control is weakened by lack of information. The Diebold preliminary study suggested the need for an "integrated approach to circulation procedures", an approach which would give book preparation consideration along with registration, charging and discharging and overdue processing. Book preparation as an area for investigation in relation to book circulation was not studied by George Fry & Associates; this, too, is a disappointment. Finally, one wishes the *Study's* final chapter, "Future Mechanization," had been treated less futuristically. The substantial increases in library circulation that are to come and that are already upon us, and the numerous cooperative or contractual arrangements to pool library services and resources that are already afoot indicate that development of the sophisticated hardware for library circulation control described in Chapter 5 should have been moved from the dream stage to the drawing board day before yesterday.—Isobel P. Lynch, Assistant Chief of Extension, Enoch Pratt Free Library, Baltimore, Maryland.

Poynter, F. N. L. *Bibliography, Some Achievements and Prospects*. Berkeley, School of Librarianship; Los Angeles, School of Library Service, The University of California, 1961. 25p.

Mr. Poynter, the Chief Librarian of the Wellcome Historical Medical Library of London, has delivered, as the first in a series of Lectures on Bibliog-

raphy at the two library schools of the University of California, an extremely literate address on the virtues and lure of descriptive and analytical bibliography in its major emphasis—e.g., 16th and 17th century English literature. While he points out that 'bibliography', like 'history', is a term used to cover many varied aspects of the same subjects ("In our sense of the word it is a generic term covering every possible aspect of book-lore," p. 5), he begins by describing his personal background and experience in order that "you may be able to detect the personal bias in my opinions." (p. 3) The bias is in fact easy to detect, for he almost totally ignores the whole range of enumerative bibliography, except, as in the case of Wing, when it serves as an adjunct to descriptive bibliography. He does mention in passing some of the newer techniques of mechanization but only to comment that "it may be that some are already planning to employ these techniques for compiling a census of older works." (p. 14)

Within these limitations, which are certainly justifiable (for it would be impossible to deal adequately with the achievements and prospects of all aspects of bibliography in one brief lecture), Mr. Poynter does an outstanding job of recounting in summary fashion the tremendous achievements of the past half-century: the development of descriptive and analytical bibliography as an independent area of scholarship; the publication of works such as Greg's monumental *Bibliography of the English Printed Drama to the Restoration*; the creation of enumerative bibliographies, such as the *Short Title Catalogue*, to aid the researcher; and finally "the service which bibliography has rendered in broadening and strengthening the basis of our culture in the twentieth century by bringing to the literature of science the disciplined attention and techniques which have proved so valuable in the study of the humanities." (p. 4)

He also hints at, though he does not dwell upon, what is surely the major weakness of descriptive and analytical bibliography—the lack of distinction made by bibliographers between sheer speculation and scientific evidence. He comments, for example, that "attempts to argue priority from uncorrected states are now best left to those who enjoy speculation." (p. 7) In one passage, however, he seems to come very directly to the point only to negate it in the last sentence: "I can also sympathize with the busy university professor or librarian who is also a bibliographer when he is warned that unless he tracks down and personally examines every copy of a text which is the object of his study then his work cannot be regarded as genuine bibliography. The number of copies of any text which remains to us is purely an accident of history, whether it be a single copy, three, or a hundred and three. It often happens that the more important the text the fewer the copies. Has the description of an 'ideal copy' based on one or two survivors the same authority as that of another reconstructed from a study of twenty? If descriptive bibliography is the mathematics of textual criticism and is indeed a scientific study we may recall that 'random sampling' is employed in many scientific procedures." (p. 10) If I read Mr. Poynter correctly, he is suggesting that it may be adequate to take a random sampling of the surviving copies in order to describe an 'ideal copy', but surely there has to be an adequate random sample of the entire edition and the size of the sample that is needed would vary with, among other things, the total number of copies published in the original edition. I would suggest that an investigation of some of our best descriptive bibliographies in which every surviving copy has been examined personally by the bibliographer would reveal that there are not, in a great many cases, enough surviving copies of the text to enable anyone to

say with any degree of *statistical accuracy* what an 'ideal copy' was or is, and that this lack of statistical accuracy is the major failing of the whole concept of the 'ideal copy' and of descriptive and analytical bibliography.

What of the prospects? Mr. Poynter is a man of moderation, and he does not make excessive and exaggerated claims for the significance of his own field. "When we discuss bibliography and its problems, let us remember that bibliography is only one of the tools of scholarship, and that scholarship itself is not the whole of life. We are also citizens and taxpayers, many of us carrying on our work at the expense of public or institutional funds, and some sense of proportion must be observed." (p. 11) One might quarrel, however, with some of his views of the prospects of bibliography as being out of line with a sense of proportion. Can we expect, for example, in a period of shortages of trained persons to provide "more and more trained librarians and bibliographers . . . who have some knowledge of the historical background of science and medicine" (p. 20)? Or that much would be accomplished by "a scheme [if it were desirable in light of the weakness in other areas of bibliography that Mr. Poynter has mentioned] were advanced students who are attracted to and interested in the period, might be required to submit, as part of their final training, a complete and detailed bibliographical description of at least one early English book which is locally available." (p. 13)? It must be recognized that this is largely a matter of individual judgment as to the value of certain projects and as to what represents a 'sense of proportion.'

On the whole, Mr. Poynter has done an admirable job of describing briefly and eloquently the present status and future goals of descriptive and analytical bibliography as seen by one who is deeply involved in this area. Perhaps at some point in this series of lectures,

though it seems unlikely, someone will present as eloquent a picture of the outstanding achievements and prospects of the other major aspect of bibliography—enumerative bibliography—which is too often regarded as ordinary, run-of-the-mill work not worthy of serious discussion.—*Norman D. Stevens, Acting Director of University Libraries, Howard University.*

Tauber, Maurice F. and Wise, Edith. *Classification Systems*. Thompson, Donald E. *Gifts, Exchanges*. New Brunswick, N. J., Rutgers University Press, 1961. 609p. \$8.00 (*The State of the Library Art*, v.1, pts.3-5)

This volume of the *State of the Library Art* series consists of three sections: two short essays on gifts and exchanges by Donald E. Thompson, and a long opus on classification systems by Maurice F. Tauber and Edith Wise. Thompson's essays are well written and informative. Each gives a description of the present situation with regard to gifts or exchanges, followed by a section reviewing contemporary comment on this situation, and finally a statement on targets for research. In addition, the exchanges essay has historical sections, which give background for modern exchange procedures. The essays are brief, concise, and deserve wide reading by library administrators, as well as acquisitions librarians.

The third section is a lengthy survey of the field of classification. It covers major classification systems, modern developments, which are mostly in special subject classifications, and a few near-classifications. It gives the history of each major classification, describes the systems themselves at least once, includes many statements from their critics, indicates their use to some degree, and either considers what their future may be or suggests questions which might be raised as to their effectiveness.

The section is hard to read. The style is choppy with few good connect-

ing sentences. Abrupt openings are the rule. There is too much quotation. If all the quotations were eliminated from this book, the fare would be rather thin. In chapter two, for example, there are only fifteen paragraphs in fifty-three pages without direct quotations. There is no record that permission to quote so extensively has been granted by any of the copyright holders.

Other scholarly qualities are open to question. Besides misstatements, such as making *American Documentation* the organ of Documentation, Inc. (p. 392), there are cases of references to references from references. In one instance (p. 394), the source for the quotation is given in full at the end of the paragraph, followed by a footnote. The footnote refers to the same source all over again (p. 415), then informs the reader, as did the paragraph of text, that the whole was cited by a secondary source. Since the original article appeared in that rare and elusive journal, *The Library Quarterly*, one wonders why it was not quoted directly. In the chapter on the Patent Office classification, there is a single sentence with no less than five superscripts at the end (p. 424). Upon looking these up (p. 436), one finds that the first four refer to "*Ibid.*" with such close paging that one note would have done, and the fifth to the "*loc. cit.*" from which all the "*Ibids.*" were derived.

The historical methodology does not inspire confidence. The historical sections contain an undue number of quotations from secondary sources—a practice frowned upon in scholarly circles. Primary sources are often quoted through secondary sources instead of directly. Some secondary sources are used for information which is of dubious value unless coming from a primary source. For example, Ranganathan, the Indian librarian, is cited as the source for information about Melvil Dewey's position as New York State Librarian.

The book contains considerable
Volume 6, Number 3, Summer, 1962

repetition. A classification scheme that is reproduced in tabular form does not need elaborate description—only enough to indicate its salient features and to show how it differs from similar ones. An analysis of how each classification fits or distorts today's knowledge would have been interesting. In this respect, the criticism sections are disappointing. The critics iterate, reiterate, elaborate, pontificate—and what they say could be summed up in a few tidy paragraphs of simple prose.

The later chapters describe recent efforts in some lines of classification. In some of these chapters the information content is skimpy. For example, the one on Calvin Mooers' Zatacoding contains many quotations from Mooers and one user which tell how simply superb Zatacoding is, but there is not enough detail given for the reader to figure out what the system involves.

All of these comments indicate one thing—a total lack of professional copyreading and a total lack of editing for the work. In this case, it is obvious that nobody wrote "Author—which?" or "? ? ?," and marked misspellings, as copy and proof readers do. Nobody told the authors that the manuscript was far too long, to shorten it, tighten up the organization, and condense, digest, summarize or plain omit most of the quotations, as editors do. Nobody gave the authors an argument over dubious points, as conscientious editors do. Those who contribute to the series on the state of the library art apparently are expected to provide perfectly organized copy, all ready for the printer, because no human hand or mind seems to touch a manuscript once it has left an author's desk.—Phyllis A. Richmond, *University of Rochester Library, Rochester, New York.*

Life Sciences, Oxford, N. Y. Pergamon Press, 1, Jan. 1962—

Subtitled "An international medium for the rapid publication of preliminary communications in the life

sciences," this new monthly journal plans to publish brief communications within two to six weeks of acceptance. In a statement of "Aims and Scope" the publishers call attention to "the value of a multidisciplinary approach in the solution to many of the major unsolved problems in the biological sciences." The six contributions in the first issue are by physiologists, biochemists, a psychologist, pharmacologists, and a physician. The "brief communications" are from two to eleven pages; each article is documented, although in one case only by two of the author's own articles. Subject matter ranges from an article on validity of the personality questionnaire to one on 5-Hydroxytryptamine in the brain. The contributions have the appearance of reports on research in progress, and should be of interest to any scientist in related fields, if he has the time to review one more journal in addition to the ones he must already see each month. No doubt such reports are useful, but the form they take here scarcely seems a contribution to any of the unsolved problems in bibliographic control.

The exponential growth of scientific literature now presents most scientists with a body of literature too gargantuan to be encompassed. As more scientists do more research, a journal which can be only scantily refereed merely compounds the existing plight. Along with the growth of the literature has come also a widening market for it, evolving its own malignant danger—that of multiple publication of the same material. Research first reported as a preliminary note may make its next appearance as an interim report before publication as a final paper. During the time lapse between its initial and its final form, it may be presented at a conference, in whose *Proceedings* it will also be published. A single report, spurred by the scientist's natural desire to get into print and by the publisher's eagerness to prepare a

marketable commodity, thus clogs further our over-burdened scientific communications.

Life Sciences will be reproduced directly from typescript. The "notes to contributors" urge, but do not demand, that manuscripts be submitted in a form suitable for direct photographic reproduction. The contributor is encouraged to shun the use of blue typewriter ribbon which does not reproduce, to have clean typewriter keys, and to center the title on the page. Some time back an exchange of letters to the editor of *Nature* (v. 186, p. 124, April 9, 1960; v. 187, p. 1052, September 17, 1960) pointed out that prices to libraries for Pergamon Press journals ranged from 3.8 to 8.9 cents per page. Pergamon's Capt. I. R. Maxwell then offered as justification the statement that their periodicals "contain considerable amounts of what is classed as 'difficult' setting by printers, and this has an appreciable effect on production costs." The difficulties of typesetting can scarcely obtain as an explanation for the high price of the present journal, however, since it is produced photographically from typescript.

The charge to libraries for *Life Sciences* is \$30.00 a year. For the six articles in issue no. 1, totalling 31 pages of text (there are 34 pages in the pagination, but three of them are blank), we are asked to pay approximately 8 cents a page. For this payment libraries would get photographic reproduction of articles which the editors say are being "carefully refereed" but about which they must recognize the "inherent danger that quality will be sacrificed to speed." The number of typing errors makes it obvious that the first issue has been only hastily edited. Its format and its egregious overpricing to libraries ("private subscribers" can subscribe for \$10.00 annually) will justify libraries in not adding this "international medium."—*Thomas D. Gillies, Serials Librarian, Linda Hall Library, Kansas City, Mo.*

Hawken, William R. *Full-Size Photocopying*. New Brunswick, N. J., Rutgers University, 1960. 397p. (*The State of the Library Art*, v. 5, part 3)

Hawken, William R. *Photocopying from Bound Volumes*. Chicago, American Library Association, 1962. 208p. (*Library Technology Project Publication*, no. 4)

While it is unlikely that these two books will ever become the subjects of literary controversy on the ground of authorship, *Full-Size Photocopying* and *Photocopying from Bound Volumes* are nonetheless so remarkably dissimilar that it would be hard to find two more diverse works published within two years of each other by the same author.

The first at once takes the reader into the infinite jungle of photoreproduction technology, a procedure that immediately challenges the declared scope of the larger work of which it is a part. Replete with information concerning spectral sensitivity, chemical reactions, cascade versus liquid development, the tribo-electric series, and so on, it offers little information to guide a librarian's policy decisions regarding photocopying. Is this much technical detail necessary to describe the state of the library art? And why has so much space been devoted to the early history of the now obsolescent Photostat process? Clearly this is a book which is far better suited to the photographic technician; the librarian seeking information on the suitability of processes for library materials will not find it in *Full-Size Photocopying*. Except for mention of a book holder in Chapter I and a two page exposition of book copying problems in each of chapters devoted to Verifax and DTR, there is practically no discussion of the numerous problems inherent in the reproduction of library materials: han-

dling of folded plates, show through of text, stained or foxed paper, wrinkled pages, fragile paper, and so forth.

Aside from some cost tables in which labor and materials are figured in Sterling units, practically none of the administrative aspects of photocopying is discussed. Among these might have been: criteria for selection of processes and their relative efficiency for different originals, personnel requirements, the significance of the distinction between step and continuous processes, principles of laboratory management, and issues of centralization and decentralization. The single reliable analysis of these matters continues to be Herman Fussler's *Photographic Reproduction for Libraries*, published twenty years ago.

The volume itself is no paragon of printing or reproduction art. Tables II-IV, particularly Table III, in Chapter VI, were virtually illegible in two copies examined. In Chapter X, two illustrations of the RCA Electrofax enlarger are reproduced with a half-tone screen so coarse that no useful detail is observable. Finally, the lack of a spine title and a running title makes reference to the volume slow and clumsy.

Every fault of *Full-Size Photocopying* is seemingly redeemed in *Photocopying from Bound Volumes*. A publication of the Library Technology Project, it is attractively printed on durable book paper and is illustrated by pertinent photographs of professional quality. Each copying process is carefully and accurately described in readable detail, intelligible to the layman as well as to the specialist. The major part of the volume summarizes a series of exhaustive tests made on nineteen contact copiers of the type likely to be found in smaller libraries which cannot afford a centralized photocopying laboratory. Specifications and prices are outlined for each machine, as well as methods of exposure, systems of illumination, and

processing. There follow an exact analysis of each machine's design requirements, a compilation of useful or necessary techniques, cost studies, and finally, a highly critical evaluation of its book copying performance.

A most valuable part of the book is the preliminary section which analyzes the four major factors in contact copying: the nature of the book as a physical entity, the design of the copier, the behavior of sensitized materials, and the role of the operator.

The revelation that contact copiers require from 40 to 100 lbs. of pressure on books is not likely to increase a librarian's enthusiasm for the contact method. The faults of this method are highlighted very effectively by the author, who also correctly points out that as yet there exists no book copier meeting even the simplest design requirements for optimum performance. It is to be hoped that manufacturers will turn over unmodified to their design staffs the author's recommendations for future design improvements, none of which need add to the cost of copiers.

It is very encouraging to read that "it is the intention of the Library Technology Project that this be a continuing program, so that as new machines are developed and marketed, they will be evaluated and reported to the library profession on a regular basis." Books like *Photocopying from Bound Volumes* greatly enhance the library profession's selectivity regarding new developments and equipment. More of this type of analysis will be very welcome in librarianship. Both the author and the Library Technology Project are to be congratulated.—*Allen B. Veaner, Specialist for Document Reproduction, Harvard University Library.*

Barrow, W. J. *Permanence and Durability of Library Catalog Cards*. A study conducted for the Library Technology Project. Chicago, American Library Association [c1961] viii,

40p \$1.00 (*LTP Publications*, no. 3)

As one of the conclusions of this study there is a tentative recommendation of specifications for card stock for heavily-used public catalogs, to obtain the maximum in permanence and durability. The specifications are in terms of minimum folding endurance, tearing resistance, aging by application of heat, and pH (acidity—alkalinity). The card stock must not contain ground wood or unbleached fibers. Low pH (high acidity) appears to be the most significant factor in rapid deterioration.

There are some other less relevant conclusions, some of which seem self-evident. One is that 100 per cent cotton rag stock may be less durable than strong chemical wood fibers, if the rag stock has a low pH. Another is that cards of less strength may be used in a catalog having moderate, not heavy use.

It is difficult for this reviewer to understand why this publication in this form is necessary. A part of it might have made a journal article of perhaps ten pages, or less. To put it out in a forty-eight page pamphlet, nearly half of whose pages are either blank or contain only a word or two doesn't seem to make very good sense.

As to the study and its conclusions, more questions arise. Mr. Barrow defines the problem of the wearing of cards in much-used catalogs as broken upper corners and soil. He states that edge wear, sometimes noticed to be as much as one sixty-fourth of an inch, is not a significant factor and that the tearing of cards is very infrequent. His tests of folding endurance are presumably to measure the tendency for cards to become dog-eared because of flexing of corners. He has nothing whatever to say in this study about the soiling of cards, which seems to this reviewer to be the major cause of the necessity for replacement. He himself

has long ago proved that the permanence of papers is very much a function of their pH factor. This has also been demonstrated by the U. S. National Bureau of Standards and by others. Why, then, did Mr. Barrow repeat this demonstration with many, many samples? If we were to have a sort of consumers' report on various brands of cards, this might have been necessary to prove the point, but the samples tested are not identified, except for one very high-testing sample.

All in all, the study does not seem to be addressed to the major problem, soiling of cards, and its conclusions were quite well known before this study was made.—*Richard H. Shoemaker, Professor of Library Service, Rutgers, The State University, New Brunswick, New Jersey.*

Madjelis Ilum Pengetahuan Indonesia (Council for Sciences of Indonesia). *Indeks Madjalah Ilmiah 1960 (Indonesian Scientific Periodical Index)*. Djakarta, 1961. 89p. (Bulletin no. 3) Free.

The publication of this slender volume is of particular interest at this time when the columns of our daily papers are filled with news of political difficulties in this trouble-laden part of the world. The evidence is heartening of Indonesian concern with, and work on, problems of importance in the building of their nation as well as in extending world scientific knowledge.

Of the 135 journals indexed in this publication, more than half deal with scientific subjects, though the social sciences are also represented, particularly economics, education, and public administration. The subject matter of the 1075 articles in the *Index* follows much the same pattern. Agricul-

ture, forestry, botany, zoology, geology, and the health sciences predominate.

A particularly valuable feature is the "List of Learned Indonesian Periodicals." Each entry contains the Indonesian title, its translation into English where necessary, the beginning date of publication, frequency, language or languages used, a brief description of contents, name of publisher and address, earlier titles in case of change, and the subscription or single copy price. Information is also given on titles available free or on exchange to universities and scientific institutions. The list is arranged according to the Universal Decimal Classification.

Also in U.D.C. order is the *Index* itself with the entries arranged alphabetically by author under the subjects. For each entry there is given the classification number, author, original title of the article, and complete bibliographical information.

A subject index to the list of journals, an author index, and a subject index to the classified *Index* round out the publication. A key to abbreviations of periodical titles and an alphabetical name index to the periodicals are included in an errata sheet.

The *Index* was compiled by the Documentation Section of the Council for Sciences of Indonesia in cooperation with six other libraries in Djakarta and Bogor, each library covering its own field.

The *Indonesian Scientific Periodical Index, 1960* is the third in a series of *Bulletins* published by the Council. The first two titles in the series are *Directory of Scientific Institutions in Indonesia* and *Report on Scientific Research in Indonesia*.—*Eleanor F. Morrissey, Serials Librarian, Joint University Libraries, Nashville, Tennessee.*

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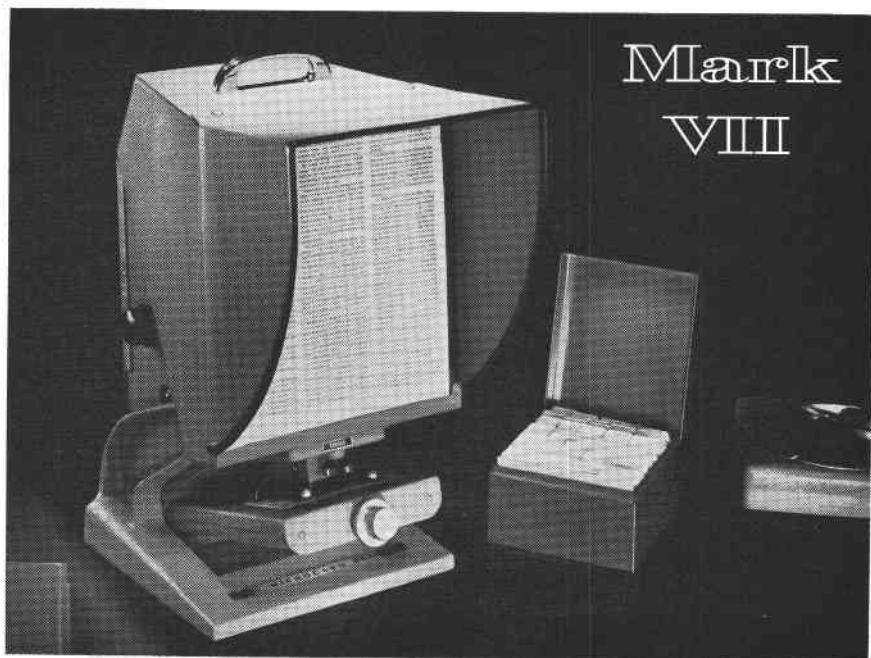
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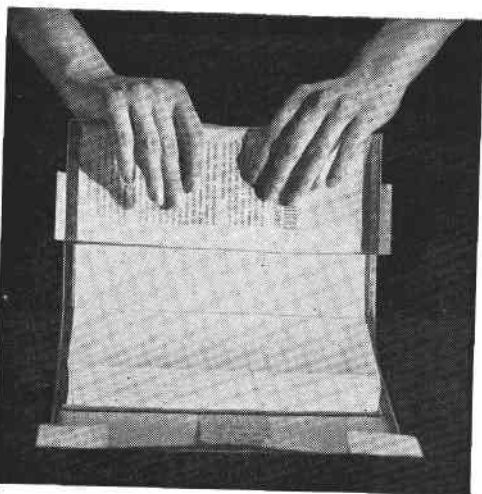
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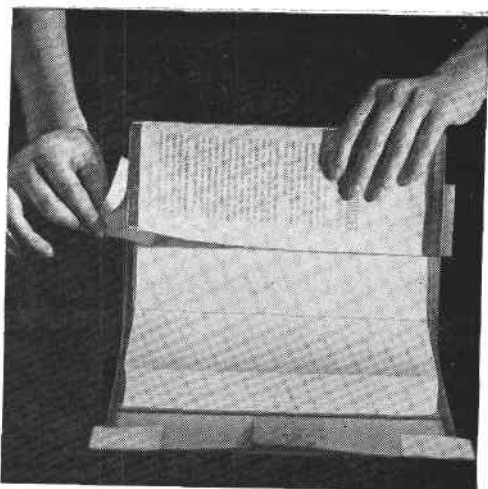
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